

# Industrial PC Specification Overview - 2018



# More than 5000 products and over 1,000,000 metres of cable in our 5000<sup>m2</sup> warehouse.

ECS are committed to holding the right products for you.





ECS is a leading supplier for electrical and automation products across New Zealand.

Founded in 1983 we are a New Zealand family owned business spanning two generations. We began by designing and manufacturing automated machinery for a range of industries including dairy production machinery and production machinery for the construction industry. Our relationships with our suppliers such as LAPP KABEL in Germany was initiated through our own demand for high quality products for our production.

Over the last 30 years ECS has evolved from a manufacturing company to a market leading supplier of electrical and automation products. We are now the exclusive distributors in New Zealand for world leading manufacturers such as LAPP KABEL, Wieland Electric, MOXA Networking and LS products.

At ECS we strive to offer the best customer service in the industry. When you phone us you will go straight through to our sales team who are made up of trained electricians and automation engineers. We are not just order takers; we are able to guide you through our products so you can select the right product to suit your requirements.

In 2012 we moved into a purpose built 2500m2 warehouse, specifically designed to suit our requirements. Located in Hamilton where we stock 5000 different parts and over 1 million metres of cable, in our 5000m2 warehouse, we are committed to holding the right products for you.

Over the course of 2015 we more than doubled the size of our warehouse giving us the ability to hold greater stock quantities and much larger cable sizes.

With our well established logistics network, we are able to deliver products to customers from Kaitaia to Invercargill in just one working day. Linking with our supplier's warehouses around the world, if customers are working overseas we are able to drop-ship directly to site anywhere in the world while handling all the paperwork back here in New Zealand.

ECS is an expanding and adapting company; we are consistently adding new products to our line-up based on customers' requirements. We strive to offer you a complete package for all your electrical and automation requirements.



ecs

FREE PHONE 0800 849 2211

2

# **QUICK REFERENCE**



# **SPC-2145**

Ultra Compact Embedded System with Quad Core Intel® Atom™ E3845, 2 Gigabit LAN, 4 USB 3.0, 4 COM, Fanless, Rugged, Extended Temperature

# **ECS-7000 Series**

High Performance, Rugged, Extended Temp., Fan-less Embedded System with 9 GbE and Intel® QM77 Express Chipset & Choice of 3rd Gen. Intel® Quad CoreTM i7/i5/i3 Mobile Processor

# ECS-7000 Series Performance Fan-less Embedded System

High Performance, Rugged, Extended Temp., Fanless Embedded System with 9 GbE and Intel® QM77 Express Chipset & Choice of 3rd Gen. Intel® Quad CoreTM i7/i5/i3 Mobile Processor

# **MTC-2021**

21.5" Fanless Multi-Touch Computer with Intel® Bay Trail Quad-Core E3845 Processor



# SPC-2145

Ultra Compact Embedded System with Quad Core Intel® Atom™ E3845, 2 Gigabit LAN, 4 USB 3.0, 4 COM, Fanless, Rugged, Extended Temperature

### FEATURES

- Ultra Compact Embedded System
- Quad Core Intel® Atom™ E3845 1.91GHz Processor
- Rugged, -25°C to 70°C Operating Temperature
- Fanless and Ultra-compact
- 6V to 36V DC Power Input
- DVI-I for VGA/ DVI/ HDMI Video Output
- Dual Independent Gigabit LAN
- 4 External USB 3.0
- 4 COM RS-232/ 422/ 485 with Auto Flow Control
- Supports 3G/ 4G/ LTE/ WiFi/ GPRS/ UMTS



## **SPECIFICATIONS**

#### SYSTEM

PROCESSOR CHIPSET BIOS SIO MEMORY I/O INTERFACE SERIAL USB LED SIM CARD EXPANSION

MINI PCIE

### GRAPHICS

GRAPHICS PROCESSOR

INTERFACE

STORAGE

SATA MSATA AUDIO AUDIO CODEC AUDIO INTERFACE

ETHERNET LAN 1 LAN 2

4

POWER POWER INPUT POWER INTERFACE REMOTE SWITCH Quad Core Intel® Atom™ E3845 1.91GHz Processor (Valleyview) Intel® SoC (Bay Trail) AMI

IT8786E 1 DDR3L 1333MHz SO-DIMM, up to 8GB

4 COM RS-232/ 422/ 485 4 USB 3.0 Power, HDD, WTD 1 Internal SIM Card Socket

2 Mini PCIe Socket : 1 Mini PCIe for PCIe/ USB/ SIM Card

1 Mini PCIe for PCIe/ USB/ Optional mSATA

#### Intel® HD

DVI-I for VGA/ DVI/ HDMI output :
 DVI : Up to 1920 x 1080
 VGA : Up to 2560 x 1600

1 SATA II (3Gbps) 1 SATA II (Mini PCle Type, 3Gbps)

Realtek ALC892, 5.1 Channel HD Audio 1 Line-out

Gigabit LAN by Intel® I210 Gigabit LAN by Intel® I210

6V to 36V, DC-in 2-pin Terminal Block : V+, V-2-pin Terminal Block : On, Off

#### OTHERS WATCHDOG TIMER

# SMART MANAGEMENT HW MONITOR

OS MECHANICAL DIMENSIONS (MM)

WEIGHT MOUNTING

#### ENVIRONMENT OPERATING TEMPERATURE

STORAGE TEMPERATURE

HUMIDITY RELATIVE HUMIDITY SHOCK

VIBRATION

EMC

Reset : 1 to 255 sec./min. per step Wake on LAN, PXE supported Monitoring temperature, voltages. Auto throttling control when CPU overheats.

Windows 8, Windows 7, Linux

106W x 150.4L x 65.9H (4.2" x 5.9" x 2.6") 1.4 kg (3.1 lb)

Wallmount by mounting bracketDIN Rail Mount (Optional)

-25°C to 70°C (-13°F to 158°F)

-40°C to 85°C (-40°F to 185°F)

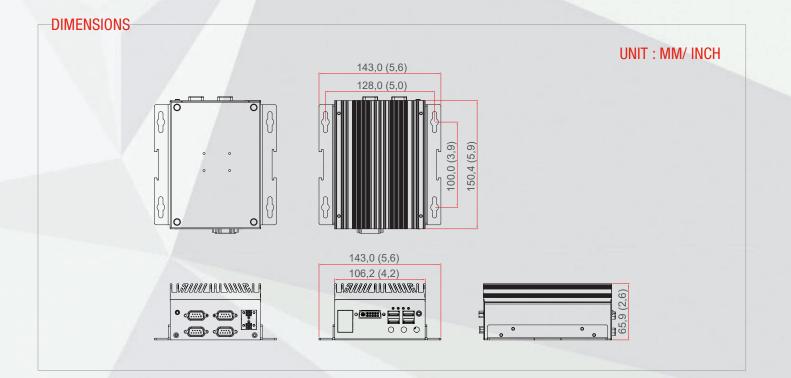
5% to 95% Humidity, non-condensing 95% @ 70°C

IEC 60068-2-27

- SSD : 50G @ wallmount, Half-sine, 11ms
- IEC 60068-2-64
  - SSD : 5Grms, 5Hz to 500Hz, 3 Axis

CE, FCC, EN 50155, EN 50121-3-2





# FRONT I/O



### **REAR I/O**



Remote Power Switch

### ORDER INFORMATION

SPC-2145 DDR3L4G DDR3L8G PWA-60WP2 DIN-RAIL 3G MODULE 4G MODULE WIFI & BLUETOOTH MODULE SPC-2145 Ultra-compact Embedded System, 2 GbE LAN, 4 COM, 4 USB, Onboard Quad Core Intel® Atom™ E3845 Certified DDR3L-1600 4G RAM Certified DDR3L-1600 8G RAM 60W, 24V/2.5A 100V AC to 240V AC Power Adapter for 2-pin 3.5mm Terminal Block DIN Rail Kit Mini PCIe 3G/GPS Module with Antenna Mini PCIe 4G/GPS Module with Antenna Intel® Mini PCIe WiFi & Bluetooth Module with Antenna

# SUGGESTED APPLICATIONS





# **ECS-7000 SERIES**



High Performance, Rugged, Extended Temp., Fan-less Embedded System with 9 GbE and Intel® QM77 Express Chipset & Choice of 3rd Gen. Intel® Quad CoreTM i7/i5/i3 Mobile Processor









### **FEATURES**

- 3rd Gen Intel® Quad Core™ i7 | i5 | i3 Ivy Bridge
- Mobile Processor (6M Cache, up to 3.30 GHz)
- Fanless, -25°C to 70°C Operation Temperature
- 9 GbE LANs, Independent LAN Controllers
- QM77 System Chipset
- Support 2 SO-DIMM DDR3 or DDR3L, up to 16GB
- Isolated 8 DI | 8 DO, GPIO 8 DI | 8 DO
- 2 SATA III (6Gbps) 2.5" SSD | HDD, mSATA

- Built-In Input 80 VDC Over voltage Protection
- Rich I/O: 4 COM, 4 USB 3.0, 2 USB2.0,
- 2 Mini-PCle (1 with SIM Card Socket)
- 5 Display Support: 2 DP, DVI-D, VGA, LVDS
- 3 Independent Displays
- Intel® AMT 8.0 Support
- Onboard Trusted Platform Module (Optional)

ECS-7000 series support 3rd Gen Intel® Quad-Core™ series processor (6M Cache, up to 3.30 GHz), DDR3L and DDR3 maximum dual channel 16GB ram, 3 independent display (DP, DVI-D, and VGA), isolated DIO, maximum 9 GbE LANs, CFast, two 2.5" SATA 6Gp/s SSD | HDD trays, 4 COM, 4 USB 3.0 ports, JST connector, and 2 mini PCI-express, plus with overvoltage protection and Trusted Platform Module which making ECS-7000 series stand out from others in machine vision and GigE imaging, intelligent automation, surveillance and security, and most of embedded applications. ECS-7000 full series powered by cutting-edge the 3rd Gen Intel® Quad-Core™ i7 Processor (6M Cache, up to 3.3 GHz) not only increasing power efficiency as much as 25% also integrates Intel® HD 4000 graphics and extremely low thermal design power as 35W providing an enhanced reliability, safety and shock resistance for fanless operation required environments. Maximum 9 GbE LANs, ECS-7000 series provide stable and speedy Ethernet with 9.6 kb/s to 1 Gb/s data transmission option for high bandwidth and supports Ethernet Control Automation Technology (EtherCAT).



#### SYSTEM

PROCESSOR CHIPSET BIOS SIO MEMORY

## I/O PORT

SERIAL INTERFACE

ISOLATED DIO I FD

GPIO **EXPANSION** 

MINI PCIE SUMIT A. B JST CONNECTOR

GRAPHICS CHIPSET DISPLAY MEMORY INTERFACE

#### STORAGE

SATA MSATA STORAGE EXPANSION

AUDIO AUDIO CODEC AUDIO INTERFACE

### ETHERNET

LAN1 LAN2 LAN3 LAN4 LAN5 LAN6 I AN7 LAN8 LAN9

### POWER

POWER INPUT POWER INPUT VOLTAGE POWER ADAPTER PROTECTION

#### OTHER

TRUSTED PLATFORM MODULE (TPM) WATCHDOG TIMER HW MONITOR

#### MECHANICAL

CHASSIS CONSTRUCTION SIZE(W X D X H) WEIGHT MOUNTING

#### ENVIRONMENT

STORAGE TEMPERATURE HUMIDITY RELATIVE HUMIDITY VIBRATION

SHOCK EMC

3rd Generation Intel® Quad Core™ i7 | i5 | i3 Ivy Bridge Processors (6M Cache, up to 3.30 GHz) Intel® Mobile OM77 AMI IT8783F

DDR3 1066 | 1333 | 1600 MHz, DDR3L 1066 | 1333 MHz, h16GB Max., 2 204-pin SO-DIMM Sockets

3 COM RS-232, 1 COM RS-232 | 485 | 422 4 USB 3.0, 2 USB 2.0, 2 Internal USB 2.0 8 DI, 8 DO (Optional) Power, HDD and CFast LEDs 16 GPIO

1 mini PCIe Socket; PCIe + USB + SIM Card Socket, 1 mini PCIe Socket; PCIe + USB 2 SUMIT Slots (Optional) 1 Internal 6-pin (Internal USB 2.0)

Intel® GMA HD 4000 Shared Memory, Up to 1.7GB DB-15 VGA | 1920 x 1200 Max., DVI-D | 1920 x 1200 Max., Display Port 1 | 2560 x 1600 Max. Display Port 2 | 1920 x 1200 Max., LVDS | Dual Channel 24-bit | 1920 x 1200 Max.

2 SATA III 6Gbps, 1 SATA II 3Gbps - Support Horizontal Type SATA DOM 2 SATA II 3Gbps CFast Slot Push In | Out Ejector

Realtek ALC892, 5.1 Channel HD Audio Line-In, Line-Out, Mic-In, Front Audio Header

Intel® 82579LM Gigabit LAN, Wake on LAN, PXE Support Intel® 82574L Gigabit LAN, Wake on LAN, PXE Support Intel® 82574L Gigabit LAN, Wake on LAN, PXE Support Intel® 82574L Gigabit LAN, Wake on LAN, PXE Support Intel® 82574L Gigabit LAN, Wake on LAN, PXE Support Intel® 82574L Gigabit LAN, Wake on LAN, PXE Support Intel® 82574L Gigabit LAN, Wake on LAN, PXE Support Intel® 82574L Gigabit LAN, Wake on LAN, PXE Support Intel® 82574L Gigabit LAN, Wake on LAN, PXE Support

1 Mini DIN, One 3-pin Terminal Block for DC-IN : V+, V-, Frame Ground DC-IN 6 ~ 36V AC to DC +24V / 5A 120W Max. (Optional)

On-Board LT4356 for Power Input High Voltage Surge Protection

Infineon SLB9635, LPC Interface (Optional)

Reset: 1 to 255 sec. / min. Per Step Temperature | Voltages Auto Throttling Control When CPU Overheats

Aluminum Housing 260mm x 175mm x 79mm (10.2" x 6.9" x 3.1") 2.8Kg (6 lb) Wall-Mount by Mounting Bracket

OPERATING TEMPERATURE -25°C to 70°C (-13°F to 157°F) -40°C to 85°C (-40°F to 185°F) 5% to 95% Humidity, Non-condensing 95% at 70°C Random: 5Grms @5~500 Hz according to IEC68-2-64 Sinusoidal: 5Grms @5~500 Hz according to IEC68-2-64 Operating, 50 Grms, Half-sine 11 ms Duration (w / SSD, According to IEC60068-2-27) CE, FCC, RoHS, EN50155 & EN50121-3-2

## **ORDER INFORMATION**

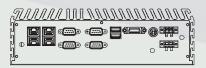
PART NUMBER

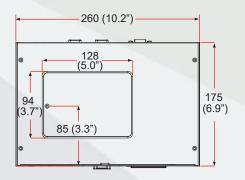
ECS-7000-9GD ECS-7000-9R ECS-7000-6GDE ECS-7000-6GD ECS-7000-6B ECS-7000-6G ECS-7000-2V ECS-7000-2R ECS-7000-2G 17-3610QE 15-3610ME 13-3120ME M340S-W28M1 KVR13S9S8/8 KVR13S9S8/4 PWA-120WM4P SCSI-20P-100 TMB-SCSI-20P WIFI MODULE

175 (6.9") 260 (10.2")

260 (10.2")









DESCRIPTION 9 GbE LAN Fanless Embedded Controller, 2 SSD | HDD, Isolated DIO, iAMT 8.0 9 GbE LAN Fanless Embedded Controller, 2 Front Panel Access Removable SSD | HDD with Key Lock, iAMT 8.0 6 GbE LAN Fanless Embedded Controller, 2 SSD | HDD, Isolated DIO, SUMIT (A, B), iAMT 8.0 6 GbE LAN Fanless Embedded Controller, 2 SSD | HDD, Isolated DIO, iAMT 8.0 6 GbE LAN Fanless Embedded Controller, 2 Front Panel Access Removable SSD | HDD with Key Lock, iAMT 8.0 6 GbE LAN Fanless Embedded Controller, 2 SSD | HDD, iAMT 8.0 2 GbE LAN Fanless Embedded Controller, 2 SSD | HDD, and 4-CH, 120 fps, Built-in Video Capture Function 2 GbE LAN Fanless Embedded Controller, 2 Front Panel Access Removable SSD | HDD with Key Lock 2 GbE LAN Fanless Embedded Controller, 2 SSD | HDD Ivy Bridge 3rd Gen Intel® Mobile Quad-Core™ i7 Processor Ivy Bridge 3rd Gen Intel® Mobile Core™ i5 Processor Ivy Bridge 3rd Gen Intel® Mobile Core™ i3 Processor Vecow DDR3 4GB 1333|1066MHz RAM, Micron® Chip, Wide Temperature -40°C ~ +85°C Kingston® DDR3 8GB PC1333 RAM Kingston® DDR3 4GB PC1333 RAM 120W, 24V, 90VAC to 264VAC power adapter 20-in SCSI Cable, 1M Terminal Board with One 20-pin SCSI Connector and DIN-Rail Mounting Intel® Mini PCIe WiFi Module with Antenna





Unit: mm (inch)

# **ECS-7000 SERIES PERFORMANCE FAN-LESS EMBEDDED SYSTEM**

High Performance, Rugged, Extended Temp., Fanless Embedded System with 9 GbE and Intel® QM77 Express Chipset & Choice of 3rd Gen. Intel® Quad CoreTM i7/i5/i3 Mobile Processor



INDUSTRIAL PLANT

INTELLIGENT AUTOMATION

SURVEILLANCE & SECURITY (NVR)

# **ISOLATED DIO**



### ECS-7000-6GDE

Ideal industrial system solution, ECS-7000-6GDE model equipped with 6 GbE LAN, Isolated DIO 8 DI, 8 DO, and SUMIT interface to provide greater effective data transfer rates. ECS-7000-6GDE model also enables 3rd Gen Intel® Quad-Core™ series processor (6M Cache, up to 3.30 GHz), 4 COM, 4 USB 3.0 ports, JST connector, and 2 miniPCIexpress, plus with overvoltage protection and Trusted Platform Module.





## ECS-7000-6GD

Collecting most industrial useful interfaces, ECS-7000-6GD model has designed with isolated DIO 8 DI, 8 DO and GPIO 8DI, 8DO. Like all other ECS-7000 series, ECS-7000-6GD enables 3rd Gen Intel® Quad-Core™ series processor (6M Cache, up to 3.30 GHz), 2 SSD/HDD trays, 4 COM, 4 USB 3.0 ports, JST connector, and 2 miniPCI-express, plus with overvoltage protection and Trusted Platform Module.

# **STANDARD**



(6M Cache, up to 3.30 GHz), 2 GbE LAN, 2 front panel access removable

SSD/HDD trays with key locks, 4 COM, 4 USB 3.0 ports, JST connector,

and 2 miniPCI-express, plus with overvoltage protection and Trusted

### ECS-7000-2R

Platform Module.

ECS-7000-2R supports 3rd Gen Intel® Quad-Core™ series processor

### ECS-7000-2G

ECS-7000-2G supports 3rd Gen Intel® Quad-Core™ series processor (6M Cache, up to 3.30 GHz), 2 GbE LAN, 2 SSD/HDD trays, 4 COM, 4 USB 3.0 ports, JST connector, and 2 miniPCI-express, plus with overvoltage protection and Trusted Platform Module.



### **APPLICATIONS**



MEDICAL & HEALTH CARE

### INTELLIGENT MANUFACTURE SYSTEM

MACHINE VISION

# GRAND



### ECS-7000-6R

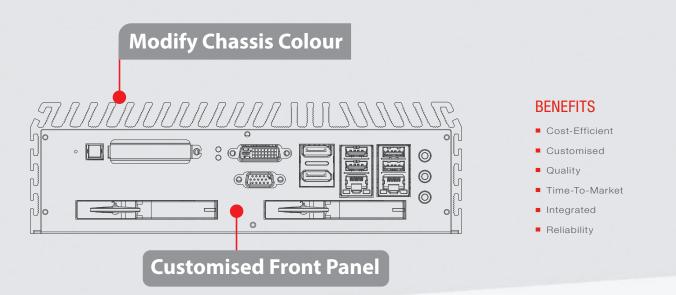
Featuring with 6 GbE LAN and 2 front panel accessible SSD/HDD trays, ECS-7000-6R model also enables 3rd Gen Intel® Quad-Core™ series processor (6M Cache, up to 3.30 GHz), 4 COM, 4 USB 3.0 ports, JST connector, and 2 miniPCI-express, plus with overvoltage protection and Trusted Platform Module.



### ECS-7000-6G

For the outstanding console functions, ECS-7000-6G model has designed with 6 GbE LAN ports for various devices to communicate with microcontroller. ECS-7000-6G model not only enables 3rd Gen Intel® Quad-Core<sup>™</sup> series processor (6M Cache, up to 3.30 GHz), 2 SSD/HDD trays, 4 COM, 4 USB 3.0 ports, JST connector, and 2 miniPCI-express, plus with overvoltage protection and Trusted Platform Module.

# **CUSTOMISED**





# MTC-2021

21.5" Fanless Multi-Touch Computer with Intel® Bay Trail Quad-Core E3845 Processor





FCCCERS

# Image: Superior of the second seco

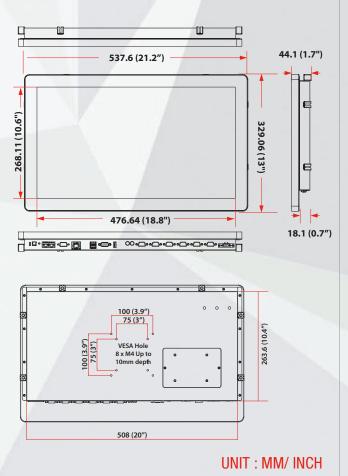
## **FEATURES**

- 21.5" 16:9 Full HD (1920x1080) LCD Panel with LED Backlight
- Projected Capacitive Multi-touch Screen
- Fanless Design with Intel<sup>®</sup> Atom<sup>™</sup> Quad-Core E3845 Processor (Bay Trail)
- Touchscreen Works with Gloves
- Ultra-compact and Slim Design with IP65 Front Panel Protection
- Mounting Methods: Panel / VESA
- 2 Giga LAN, 1 USB 3.0, 2 USB 2.0, 8 GPIO, 6 COM Ports Including 2 Isolated RS-232/422/485
- Wide DC Range of 9V ~ 28V
- Support 3G/4G/GPS/GPRS/WiFi/Bluetooth (Optional)
- Sunlight Readability Requirements (Optional)

The 21.5 inch slim and ultra-compact Multi-Touch Panel PC, MTC-2021, housed in a 4.4 cm casing, weighs only 5.8 kg, is designed to full a variety of applications in industrial environments. This all-in one fanless multimedia panel PC is powered by a low-voltage high performance Intel® Atom<sup>™</sup> Quad-Core E3845 Processor (Bay Trail) and equipped with projected capacitive multi-touch screen that works with gloves. The MTC-2021 has built-in 2 GbE LAN, 3 USB port, 6 COM port, 8 GPIO with optional 3G/4G/GPS/GPRS/WiFi/Bluetooth module. The wide operating temperature (0°C to +50°C), DC input range (9V ~ 28V), and the sunlight-readable option offer great reliability for operations in harsh environments. In addition, its IP65 grade front bezel protects the system from liquid damage. The MTC-2021 is an excellent HMI machine for applications in Intelligent Manufacturing System, Environmental Monitoring, Transportation, Internet of Things (IoT), self-service kiosk, and Retail outlets.



### DIMENSIONS



### **SPECIFICATION**

#### DISPLAY PANEL

TYPE VIEWABLE SIZE IMAGE RESOLUTION DISPLAY COLOUR BACKLIGHT BRIGHTNESS (CD/M2) VIEWING ANGLES CONTRAST RATIO

### TOUCH SCREEN

TYPE TRANSPARENCY SURFACE HARDNESS CONTROL INTERFACE

#### SYSTEM PROCESSOR

CHIPSET MEMORY DISPLAY AUDIO SOFTWARE SUPPORT STORAGE

SATA HDD MSATA

#### a-Si TFT-LCD 21.5" (16:9) 1920 x 1080 (Full HD) 16.7 M (RGB 8 bits) LED 250 (Optional, Up to 1200) 89/89/89/89 (L/R/U/D) 3000:01:00

10 points Projected Capacitive ≧ 85% 7H USB

Intel® Atom™ Quad Core Valleyview E3845 Processor (1.91GHz, Bay Trail ) Valleyview SoC 1 DDR3L 1333 SODIMM, Max. 8Gb VGA or HDMI output Mic-In, Line-Out Windows 8, Windows 7, WES7, Linux

1 SATA II Port at 3.0Gb/s 1 mSATA (Mini-PCIe type)

### SUGGESTED APPLICATIONS



#### I/O PORTS SERIAL PORTS

LAN USB GPIO MINI PCIE SLOT

OTHER

#### GPS POWER

INPUT POWER ADAPTER

MECHANICAL DIMENSIONS (WXHXD) GROSS WEIGHT IP PROOF MOUNTING

ENVIRONMENT OPERATING TEMPERATURE STORAGE TEMPERATURE HUMIDITY VIBRATION

SHOCK

EMC

#### 2 Isolated RS-232/422/485 with 5K VDC 2 Intel® GbE WG82574L 1 USB 3.0, 2 USB 2.0 8 GPIO Mini-PCIe Socket (PCIe+USB +SIM Card Socket) Mini-PCIe Socket (PCIe+USB) mSATA Socket 3 Pre-Cast Holes for Antenna On-board GPS Module (Optional)

6 COM Ports (2 RS-232, 4 RS-232/422/485)

Terminal Block; DC-IN 9~28V AC to DC 60W power adaptor (Optional)

537.6 x 329.06 x 44.1 mm (21.2" x 13" x 1.7") 5.8 KG (12.8 lb) Front IP65 Water and Dust Proof VESA mount (75 x 75mm & 100 x 100mm) Panel mount

0°C to 50°C (32°F to 122°F) -20°C to 60°C (-4°F to 140°F) 10% to 90%, Non-condensing IEC 60068-2-64 Non-operation: 10-200 Hz, 1.5 Grms, X, Y, Z, 30 mins each Axis IEC 60068-2-27 20G, half sine, 11ms CE, FCC A, RoHS

# **ORDER INFORMATION**

PART NUMBER MTC-2021 OPTION DDR3L8G DDR3L4G PWA-60WP3B PANEL-MOUNT VESA-MOUNT

### DESCRIPTION

21.5" Fanless Multi-Touch Computer with Intel® Bay Trail Quad-Core E3845 Processor

Certified DDR3L-1600 8G RAM Certified DDR3L-1600 4G RAM 60W, 24V/2.5A 100V AC to 240V AC Power Adapter for 3 Pin 5.0mm Terminal Block Panel mount Kit VESA Table Stand



# INTELLIGENT MANUFACTURING SYSTEM

# TRANSPORTATION

# SELF-SERVICE KIOSK

# ENVIRONMENTAL MONITORING

RETAIL



LOCATION



### POST

PO BOX 20204, Te Rapa Hamilton, North Island New Zealand 
 SALES
 0800 849 2211

 PHONE
 (07) 849 2211

 FAX
 (07) 849 2220

WEB ESHOP EMAIL ecsnz.com express.ecsnz.com sales@ecsnz.com

Cnr Te Rapa & RuffellPO BCRoads, Hamilton, 3200,HamiltNorth Island, New ZealandNew Z