

# EXPC-F2120W 系列

通過 Zone 2 危險場所認證的 12.1 吋無風扇工業級觸控電腦



## 特色與優點

- 12.1 吋 16:10 顯示器
- 高效能 Tiger Lake Intel® Core™ i7/ Core™ i3 或 Intel® Celeron® 處理器
- 內建光感測器，可自動調節螢幕亮度
- 1200 尼特高亮防眩光顯示螢幕，於陽光下清晰可視
- 採用光學貼合技術的顯示器，適用於惡劣環境部署
- 無風扇散熱設計，可在高溫環境下實現高效散熱
- 通過 UL C1D2/C2D2、ATEX 與 IECEx ZONE 2/Zone 22 認證
- 前面板符合 IP66，背面達 IP42 防護等級
- -40°C 至 70°C 操作溫度範圍
- 可選配 5G 與 Wi-Fi 6 無線模組
- 專為在危險場所及針對重要任務應用部署所設計

## 認證



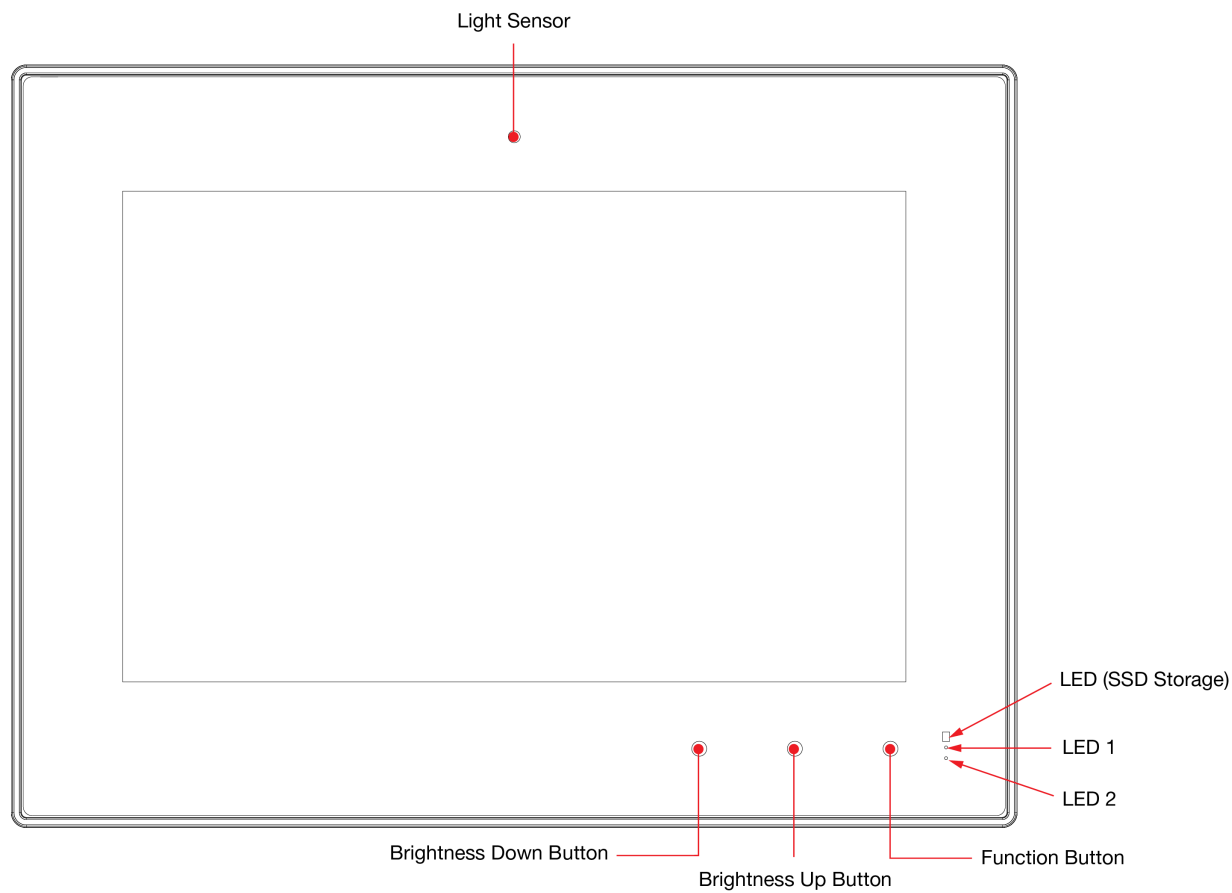
## 簡介

EXPC-F2120W 系列包含 12.1 吋面板 PC 及第 11 代 Intel Core™ i 處理器，提供可靠、耐用及多樣化的平台，在工業、危險及關鍵應用環境中使用。EXPC-F2120W 面板 PC 隨附一組豐富的通訊介面，可滿足您所有的工業應用情境。面板 PC 也提供 DisplayPort 與 VGA 視訊輸出，以便於擴展顯示。

EXPC-F2120W 面板 PC 隨附無風扇設計，可在 -40 至 70°C 的溫度範圍內操作，並提供具充分散熱功能的流線型外殼，使其成為最可靠的工業平台，可用於嚴苛、高溫、室外環境，例如油田及天然氣田、探鑽平台與發電廠，以及智慧型暖氣解決方案。面板 PC 也專門設計了日光可讀功能，例如 1200 尼特 LCD 面板、可支援手套操作的投射式電容觸控螢幕、多點觸控螢幕、光學貼合及抗眩光設計，可為戶外應用提供絕佳使用者體驗。

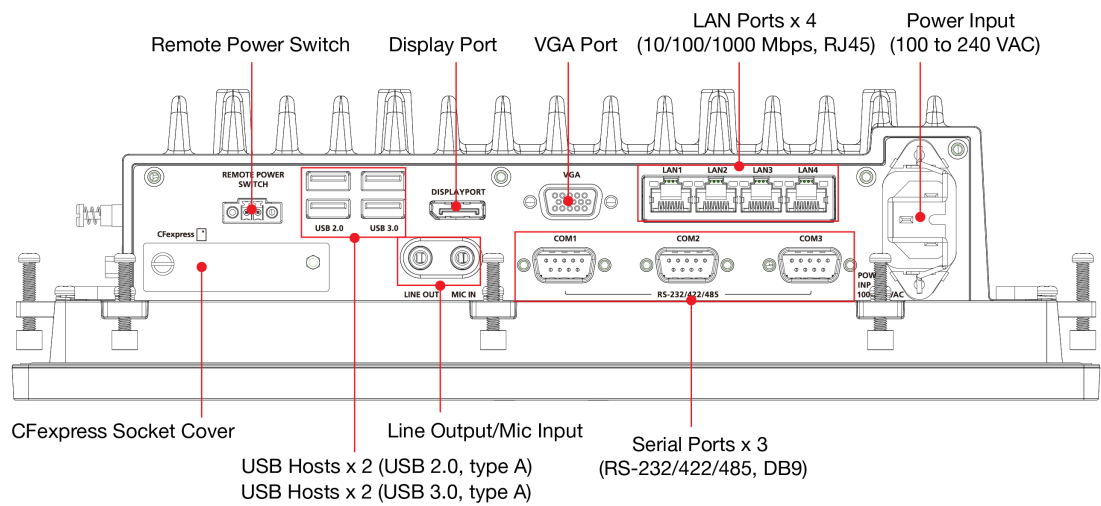
外觀

前視圖

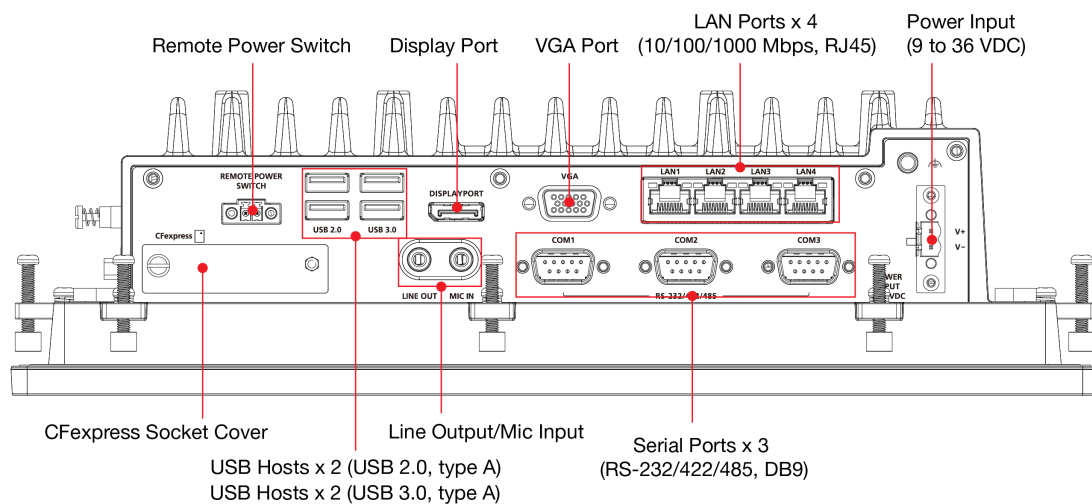


底視圖

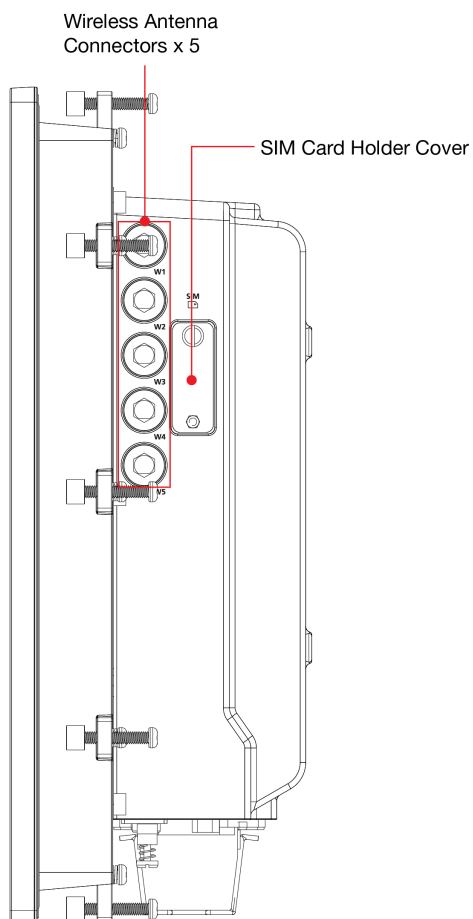
配備 AC 電源輸入的型號



配備 DC 電源輸入的型號



側視圖



## 規格

### Computer

|                             |                                                                                                                 |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------|
| CPU                         | TL1 models: Intel® Celeron® 6305E<br>TL3 models: Intel® Core™ i3-1115G4E<br>TL7 models: Intel® Core™ i7-1185G7E |
| Graphics Controller         | Intel® Core™ i7 models: Intel® Iris® Xe Graphics<br>Intel® Celeron®, Core™ i3 models: Intel® UHD Graphics       |
| System Memory Pre-installed | 16 GB (64 GB max)                                                                                               |
| System Memory Slot          | SODIMM DDR4 slots x 2, up to 64 GB                                                                              |
| Pre-installed OS            | OS is not pre-installed<br>OS installation via CTOS                                                             |
| Supported OS                | Windows 10 Enterprise LTSC 21H2<br>Windows 11 Professional 23H2 64-bit<br>Debian 11 (driver)                    |
| Storage Slot                | M.2 B key x 1 for SSD (internal, optional)<br>CFexpress slots x 1 (external, default)                           |

### Computer Interface

|                    |                                                                         |
|--------------------|-------------------------------------------------------------------------|
| Ethernet Ports     | Auto-sensing 10/100/1000 Mbps ports (RJ45 connector) x 4                |
| Serial Ports       | RS-232/422/485 ports x 3 (software-selectable, DB9 male connector)      |
| USB 3.0            | USB 3.0 hosts x 2, type-A connectors                                    |
| USB 2.0            | USB 2.0 hosts x 2, type-A connectors                                    |
| Audio Input/Output | Line in x 1, mic-out x 1, 3.5 mm phone jack                             |
| Video Output       | DisplayPort x 1<br>VGA x 1, 15-pin D-sub connector (female)             |
| Expansion Slots    | M.2 B key slot x 1 for 5G module<br>M.2 E key slot x 1 for Wi-Fi module |
| TPM                | TPM v2.0                                                                |
| Remote Management  | Intel® Active Management Technology (AMT) support                       |

### LED Indicators

|        |                                                                          |
|--------|--------------------------------------------------------------------------|
| System | Power x 1<br>Storage x 1, SSD                                            |
| LAN    | 2 per port, configurable by BIOS settings or via a Moxa software utility |
| Serial | 2 per port, configurable by BIOS settings or via a Moxa software utility |

### Display

|                              |                              |
|------------------------------|------------------------------|
| Active Display Area          | 304.128 (H) x 228.096 (V) mm |
| Aspect Ratio                 | 16:10                        |
| Contrast Ratio               | 750:1                        |
| Light Intensity (Brightness) | 1200 nits                    |
| Max. No. of Colors           | 16.7M (8-bit/color)          |
| Panel Size                   | 12.1 in                      |

|                   |                                                      |
|-------------------|------------------------------------------------------|
| Panel Type        | AWV                                                  |
| Pixel Pitch (RGB) | 0.294 (H) x 0.294 (V) mm                             |
| Pixels            | 1280 x 800                                           |
| Response Time     | 18 ms (TR, gray to gray)<br>12 ms (TD, gray to gray) |
| Viewing Angles    | Horizontal: 85°/85°<br>Vertical: 85°/85°             |

#### Touch Function

|                      |                                                                             |
|----------------------|-----------------------------------------------------------------------------|
| Touch Type           | Projective Capacitive touchscreen (PCAP)<br>GGG sensor with optical bonding |
| Touch Support Points | 4 points<br>(max multi-touch points)<br>1 point<br>(glove-friendly design)  |

#### Serial Interface

|              |                                                                                                     |
|--------------|-----------------------------------------------------------------------------------------------------|
| Baudrate     | 50 bps to 115.2 kbps                                                                                |
| Data Bits    | 5, 6, 7, 8                                                                                          |
| Flow Control | RTS/CTS, XON/XOFF<br>ADDC (automatic data direction control) for RS-485<br>RTS Toggle (RS-232 only) |
| Parity       | None, Even, Odd, Space, Mark                                                                        |
| Stop Bits    | 1, 1.5, 2                                                                                           |

#### Serial Signals

|           |                                        |
|-----------|----------------------------------------|
| RS-232    | TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND |
| RS-422    | Tx+, Tx-, Rx+, Rx-, GND                |
| RS-485-2w | Data+, Data-, GND                      |
| RS-485-4w | Tx+, Tx-, Rx+, Rx-, GND                |

#### Power Parameters

|                   |                                                     |
|-------------------|-----------------------------------------------------|
| Input Voltage     | DC models: 9 to 36 VDC<br>AC models: 100 to 240 VAC |
| Power Consumption | 60 W (max)<br>100 W (with thermal heater)           |

#### Physical Characteristics

|            |                                                      |
|------------|------------------------------------------------------|
| Housing    | Aluminum                                             |
| IP Rating  | IP66 (front)<br>IP42 (rear; with all IOs plugged in) |
| Dimensions | 336.69 x 255.17 x 94.05 mm (13.25 x 10.05 x 3.70 in) |
| Weight     | 6,200 g (13.67 lb)                                   |

## Environmental Limits

|                                        |                            |
|----------------------------------------|----------------------------|
| Operating Temperature                  | -40 to 70°C (-40 to 158°F) |
| Storage Temperature (package included) | -45 to 75°C (-49 to 167°F) |
| Altitude                               | 3000 m                     |

## Standards and Certifications

|                              |                                                                                                                                                                                                                                                                                                                              |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EMC                          | EN 55032/35<br>EN 61000-6-2/-6-4                                                                                                                                                                                                                                                                                             |
| EMI                          | CISPR 32, FCC Part 15B Class A                                                                                                                                                                                                                                                                                               |
| EMS                          | IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV<br>IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m; 1.8, 2.6, 3.5, 5 GHz: 3 V/m<br>IEC 61000-4-4 EFT: Power: 2 kV(AC), 1 kV(DC); Signal: 0.5 kV<br>IEC 61000-4-5 Surge: Power: 2 kV (AC), 0.5 kV (DC L-L), 1 kV (DC L-G); Signal: 1 kV<br>IEC 61000-4-6 CS: 10 V<br>IEC 61000-4-8 PFMF |
| Hazardous Locations          | EN / IEC 60079-0<br>EN / IEC 60079-7<br>EN / IEC 60079-15<br>C1D2/C2D2, ATEX, and IECEx ZONE 2/Zone 22                                                                                                                                                                                                                       |
| Mechanical Protection Rating | IEC 60529, IP code                                                                                                                                                                                                                                                                                                           |
| Safety                       | UL 62368-1<br>EN 62368-1<br>IEC 62368-1                                                                                                                                                                                                                                                                                      |
| Shock                        | IEC 60068-2-27 compliant (with CFexpress card, 20G)                                                                                                                                                                                                                                                                          |
| Vibration                    | IEC 60068-2-27 compliant (with CFexpress card, 20G)                                                                                                                                                                                                                                                                          |
| UV Protection                | IEC60068-2-5<br>CIE85: 300 to 3000 nm (included UV, visible, IR); 1000 hrs (procedure C; continuously for 24 hrs)                                                                                                                                                                                                            |

## Declaration

|               |                   |
|---------------|-------------------|
| Green Product | RoHS, CRoHS, WEEE |
|---------------|-------------------|

## Warranty

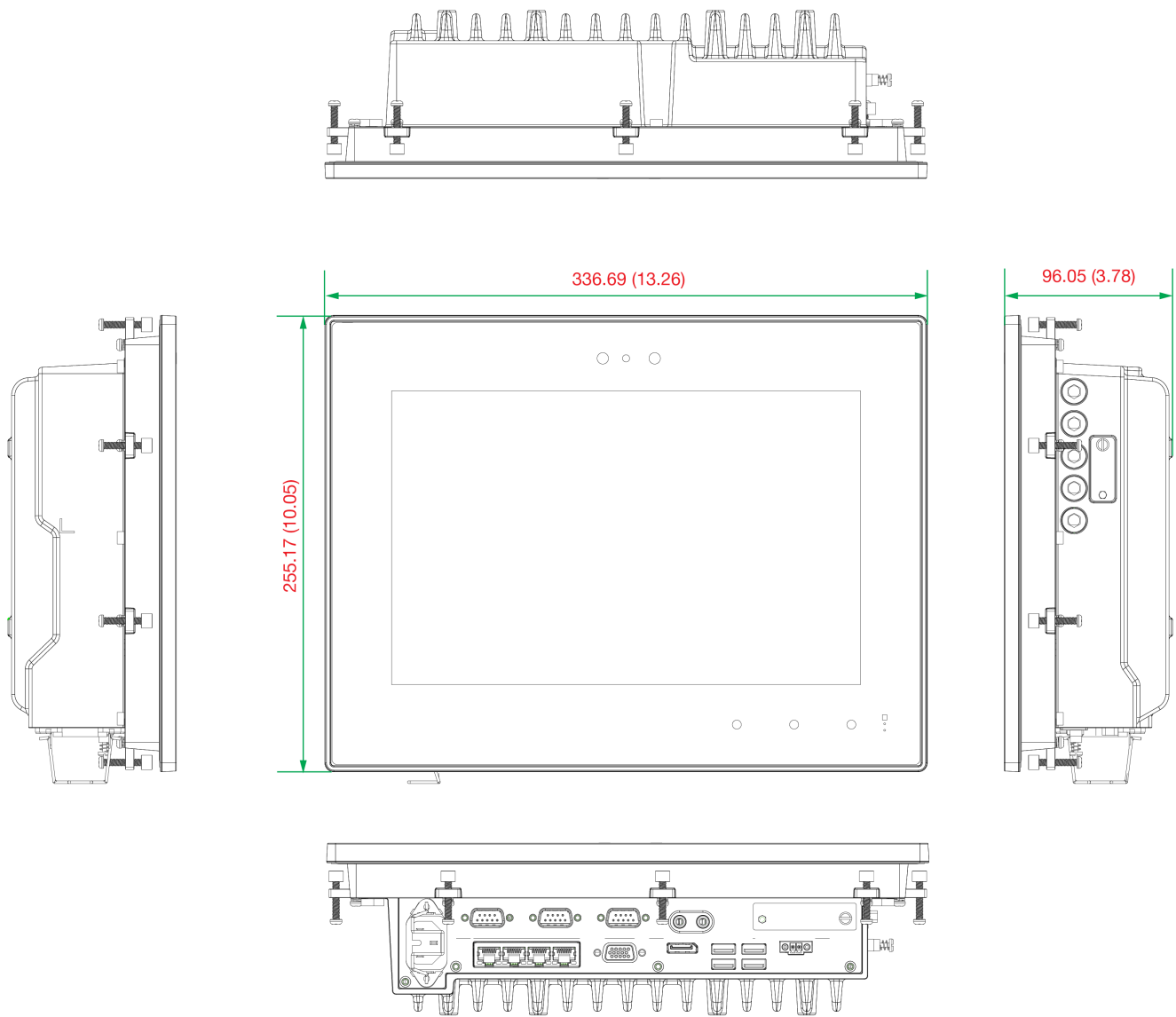
|                 |                                                                            |
|-----------------|----------------------------------------------------------------------------|
| Warranty Period | LCD: 1 year<br>System: 3 years                                             |
| Details         | See <a href="http://www.moxa.com/tw/warranty">www.moxa.com/tw/warranty</a> |

## Package Contents

|                  |                                                                                                                                                                |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Device           | 1 x EXPC-F2120W Series panel computer                                                                                                                          |
| Installation Kit | 1 x panel-mounting kit<br>DC models: 1 x 2-pin terminal block for DC power connector<br>AC models: 1 x AC adapter cable with C14 male to C15 female connectors |
| Documentation    | 1 x quick installation guide<br>1 x warranty card                                                                                                              |

尺寸

單位：公釐（英吋）



訂購資訊

| Model Name         | Panel                    | CPU                     | RAM               | OS Preinstall ed | Touchscr een | LAN | Serial | Video Outputs               | Power Input    | IP Rating                 | Operatin g Temp. |
|--------------------|--------------------------|-------------------------|-------------------|------------------|--------------|-----|--------|-----------------------------|----------------|---------------------------|------------------|
| EXPC-F2120W-TL1-DC | 12.1" (16:10) 1,200 nits | Intel® Celeron® 6305E   | 16 GB (64 GB max) | –                | PCAP         | 4   | 3      | 1 x VGA<br>1 x DisplayP-ort | 9 to 36 VDC    | IP66 (front), IP42 (rear) | -40 to 70°C      |
| EXPC-F2120W-TL3-DC | 12.1" (16:10) 1,200 nits | Intel® Core™ i3-1115G4E | 16 GB (64 GB max) | –                | PCAP         | 4   | 3      | 1 x VGA<br>1 x DisplayP-ort | 9 to 36 VDC    | IP66 (front), IP42 (rear) | -40 to 70°C      |
| EXPC-F2120W-TL7-DC | 12.1" (16:10) 1,200 nits | Intel® Core™ i7-1185G7E | 16 GB (64 GB max) | –                | PCAP         | 4   | 3      | 1 x VGA<br>1 x DisplayP-ort | 9 to 36 VDC    | IP66 (front), IP42 (rear) | -40 to 70°C      |
| EXPC-F2120W-TL1-AC | 12.1" (16:10) 1,200 nits | Intel® Celeron® 6305E   | 16 GB (64 GB max) | –                | PCAP         | 4   | 3      | 1 x VGA<br>1 x DisplayP-ort | 100 to 240 VAC | IP66 (front), IP42 (rear) | -40 to 70°C      |

| Model Name             | Panel                             | CPU                                | RAM                     | OS<br>Preinstall<br>ed | Touchscr<br>een | LAN | Serial | Video<br>Outputs                   | Power<br>Input    | IP Rating                          | Operatin<br>g Temp. |
|------------------------|-----------------------------------|------------------------------------|-------------------------|------------------------|-----------------|-----|--------|------------------------------------|-------------------|------------------------------------|---------------------|
| EXPC-F2120W-<br>TL3-AC | 12.1"<br>(16:10)<br>1,200<br>nits | 'Intel®<br>Core™<br>i3-<br>1115G4E | 16 GB<br>(64 GB<br>max) | –                      | PCAP            | 4   | 3      | 1 x VGA<br>1 x<br>DisplayP-<br>ort | 100 to<br>240 VAC | IP66<br>(front),<br>IP42<br>(rear) | -40 to<br>70°C      |
| EXPC-F2120W-<br>TL7-AC | 12.1"<br>(16:10)<br>1,200<br>nits | Intel®<br>Core™<br>i7-<br>1185G7E  | 16 GB<br>(64 GB<br>max) | –                      | PCAP            | 4   | 3      | 1 x VGA<br>1 x<br>DisplayP-<br>ort | 100 to<br>240 VAC | IP66<br>(front),<br>IP42<br>(rear) | -40 to<br>70°C      |

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