

# 1280 Enterprise Series

Programmable Color Touchscreen HMI Indicator/Controller



## Standard Features

- Seven-inch, 800 x 480 pixel, graphical color display that adjusts for ambient light conditions
- Highly customizable graphical user interface
- Three different enclosure types: universal with tilt stand, panel mount and wall mount
- Five-wire resistive color touchscreen that can be used with gloves
- On-screen keyboard available during entry mode or use an external keyboard
- Multi-language operation and text entry
- Keypad for scale operations, numeric entry and navigation
- More than 150 built-in functions for programming
- Customize applications and data tables with iRite™ software
- Built-in web server for remote access, systems integration and data monitoring
- Up to eight scales supporting four scale types:
  - Analog load cell scales
  - Serial scales
  - Total scales
  - Program scales
- Multi-range/interval weighing functions
- Eight digital I/O for control and pulse count
- 100 setpoints, 18 configurable setpoint types
- 22 soft keys with 10 user-defined
- Two RS-232 and RS-485 serial ports
- USB, Ethernet TCP/IP, Wi-Fi and Bluetooth® ports

## Options

- Six option slots that support:
  - A/D scale channels
  - Digital input and outputs
  - Analog outputs
  - Serial ports
  - Four channel dry-contact relay
  - Various protocol interfaces

## Approvals



## Specifications

### Power AC:

Line voltages: 100-240 VAC 50 Hz or 60 Hz  
Power: up to 60 watts

### Power DC:

Line voltages: 11-30 VDC  
Power: up to 60 watts

### Excitation Voltage:

10 ± 0.5 VDC, with A/D card installed  
16 x 350 Ω or 32 x 700 Ω load cells per A/D card

### Analog Signal Input Range:

-60 mV to 60 mV

### Analog Signal Sensitivity:

1.0 μV/graduation minimum at 7.5 Hz-120 Hz  
4.0 μV/graduation typical at 960 Hz

### A/D Sample Rate:

7.5 to 960 Hz, software selectable

### Resolution:

Internal resolution: 8 million counts  
Weight display resolution: 9,999,999

### System Linearity:

± 0.01% full scale

### Digital I/O:

Eight I/O channels on CPU board; optional serial ports:  
24-channel I/O expansion boards available

### Circuit Protection:

600W transient voltage suppression Protection for ESD, EFT

### Onboard:

Microprocessor: Freescale i.MX6  
Software selectable digital filter: Three stage, adaptive or damping  
Embedded Linux® OS  
8 GB eMMC (system use)  
1 GB DDR3 RAM  
460 MB onboard database (SQLite) storage  
Up to 32 GB micro SD card (sold separately)

### Communication Ports:

Port 1 & 2: Full duplex RS-232 with CTS/RTS, RS-422/485  
Baud Rate: 1200, 2400, 4800, 9600, 19200,  
(Ports 1 & 2) 38400, 57600 and 115200  
Port 3: USB 2.0 Device (Micro)  
Port 4: Bluetooth® SPP 2.1+EDR, Standards 4Mbaud  
USB Host: (2) Type A Connectors max 500 mA  
Ethernet: Wired 10/100 Auto-MDX  
Ethernet: Wireless 802.11 b/g/n 2.4GHz

### Display and Keyboard:

Display: Seven-inch, 800 x 480 pixel, graphical color TFT display 500 or 1000 NIT  
Keyboard: 22-key membrane panel, tactile buttons, on-screen keyboard for text and numeric entry, USB port for external keyboard connection

### Language Support\*:

English, Spanish, French, Portuguese, Italian, German, Dutch, Danish, Swedish, Russian, Ukrainian, Hebrew, Chinese, Turkish, Thai, Arabic

\*Language support for prompting and text entry.

### Operating Temperature:

Legal: 14°F to 104°F (-10°C to 40°C)  
Industrial: -4°F to 131°F (-20°C to 55°C)

### Weight:

Universal enclosure: 11 lb (4.9 kg)  
Panel Mount enclosure: 7 lb (3.1 kg)  
Wall Mount enclosure: 23 lb (10.4 kg)

### Rating/Material:

NEMA Type 4X/IP66 stainless steel wall enclosure  
NEMA Type 4X/IP69K stainless steel universal and panel mount door

### Warranty:

Two-year limited warranty

### Approvals:

NTEP CC 15-00/Class III/III 10,000d  
Measurement Canada AM-5980C, Class III/III HD 10,000d  
OIML TC8596, Class III/III 10,000d,  
CE Marked  
c-UL Listed and C-UR Recognized (pending)

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## Generate a 1280 Enterprise Series Model Reference Code

This reference number can be used at time of ordering.

**ENCLOSURE TYPE**

- 1 Universal
- 2 Panel
- 3 Wall
- 4 Universal *special*
- 5 Panel *special*
- 6 Wall *special*

**POWER TYPE**

- 1 AC
- 2 DC

**CORD TYPE**

- 1 NEMA 5-15 Universal
- None
- 3 CEE 7/7 Universal
- 4 NEMA 5-15 Wall
- 5 CEE 7/7 Wall

**DISPLAY TYPE**

- 1 500NIT Universal
- 2 1000NIT Universal
- 3 500NIT Panel/Wall
- 4 1000NIT Panel/Wall

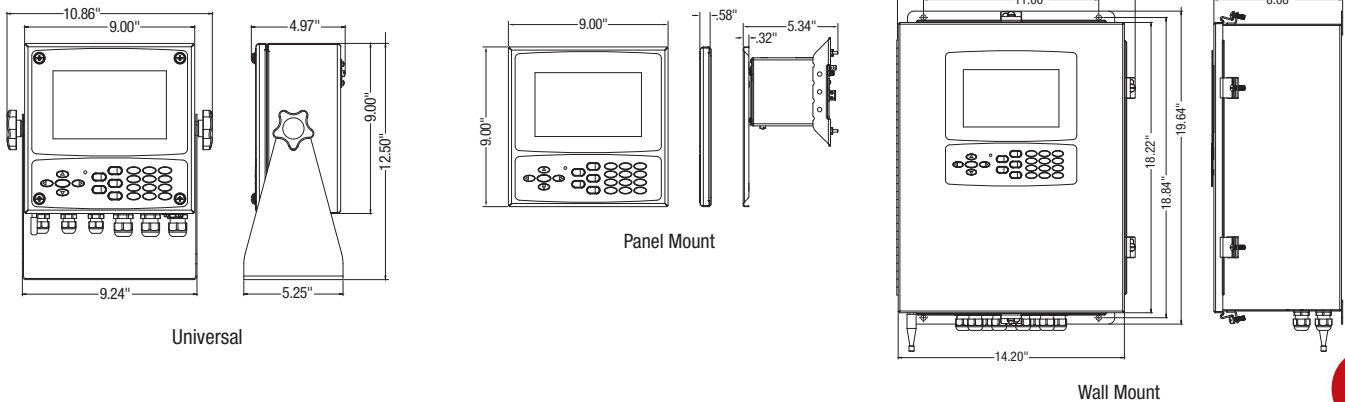
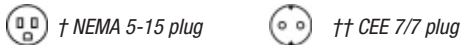
**OPTION CARDS** ALL SLOTS MUST BE FILLED

*If no option, controller will need 6 blanks*

- A Blank
- B Single A/D Scale
- C Dual A/D Scale
- D 24 Channel Digital I/O
- E Dual Serial Channel
- F Single Analog Out
- G Dual Analog Out
- I 4-dry Contact Relay
- J EtherNet/IP
- K DeviceNet
- L ProfiNet
- M Modbus TCP
- N Profibus DP

### Part Number

PART #	REFERENCE #	DESCRIPTION	POWER	DISPLAY	OPTION INSTALLED	PRICE
<b>Universal Enclosure with 500 NIT Display</b>						
171427	1111BAAAAA	1280 Universal	115 VAC with US Plug	500 NIT	Single Scale Card	Consult
171441	1131BAAAAA	1280 Universal	85-265 VAC with Euro Plug	500 NIT	Single Scale Card	Consult
171662	1111CAAAAA	1280 Universal	115 VAC with US Plug	500 NIT	Dual Scale Card	Consult
172188	1131CAAAAA	1280 Universal	85-265 VAC with Euro Plug	500 NIT	Dual Scale Card	Consult
<b>Panel mount Enclosure with 500 NIT Display</b>						
171663	21-3BAAAAA	1280 Panel Mount	85-265 VAC	500 NIT	Single Scale Card	Consult
172186	21-3CAAAAA	1280 Panel Mount	85-265 VAC	500 NIT	Dual Scale Card	Consult
<b>Wall mount Enclosure with 500 NIT Display</b>						
173673	3143BAAAAA	1280 Wall Mount	115 VAC with US Plug	500 NIT	Single Scale Card	Consult
174143	3153BAAAAA	1280 Wall Mount	85-265 VAC with Euro Plug	500 NIT	Single Scale Card	Consult
174144	3143CAAAAA	1280 Wall Mount	115 VAC with US Plug	500 NIT	Dual Scale Card	Consult
174145	3153CAAAAA	1280 Wall Mount	85-265 VAC with Euro Plug	500 NIT	Dual Scale Card	Consult
<b>Wall mount Enclosure with 1000 NIT Display</b>						
172184	3144BAAAAA	1280 Wall Mount	115 VAC with US Plug	1000 NIT	Single Scale Card	Consult
172185	3154BAAAAA	1280 Wall Mount	85-265 VAC with Euro Plug	1000 NIT	Single Scale Card	Consult
173806	3144CAAAAA	1280 Wall Mount	115 VAC with US Plug	1000 NIT	Dual Scale Card	Consult
172187	3154CAAAAA	1280 Wall Mount	85-265 VAC with Euro Plug	1000 NIT	Dual Scale Card	Consult



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## Single A/D Scale



**Excitation Voltage:**  
10 VDC bi-polar, 4 or 6 wire sensing  
16 x 350 ohms per channel  
**Analog Input Signal:**  
-10 to +40 mV

PART #	DESCRIPTION	PRICE
164085	1280 option, single scale A/D	Consult
163407	Board only	Consult
163782	Parts kit	Consult
153883	Connector, 6-position	Consult
166957	A/D sealing kit (not included in option)	Consult

## Dual A/D Scale



**Excitation Voltage:**  
10 VDC bi-polar, 4 or 6 wire sensing  
8 x 350 ohms per channel  
**Analog Input Signal:**  
-10 to +40 mV

PART #	DESCRIPTION	PRICE
164683	1280 option, dual scale A/D	Consult
160760	Board only	Consult
163784	Parts kit	Consult
153883	Connector, 6-Position	Consult
166957	A/D sealing kit (not included in option)	Consult

## Digital I/O



24 channels, configurable as inputs or outputs  
Inputs: 5 VDC max, active low; Outputs: 20 mA max per channel, active low; 5 VDC source available: 500 mA max

PART #	DESCRIPTION	PRICE
164684	1280 option, digital I/O	Consult
160761	Board only	Consult
164691	Parts Kit	Consult
164918	Connector, 10-Position	Consult

*For 24 I/O ribbon cable required.*

## Dual Serial Channel



2 channel, full duplex RS-232 with CTS/RTS, RS-485 or RS-422, 1200-115200 baud

PART #	DESCRIPTION	PRICE
164685	1280 option, dual serial channel	Consult
162930	Board only	Consult
164692	Parts kit	Consult
153882	Connector, 5-Position	Consult

## Single Analog Out



16 bit, voltage output 0-10 VDC, current output 0-20mA, 4-20mA

PART #	DESCRIPTION	PRICE
165366	1280 option, single analog out	Consult
164704	Board only	Consult
168816	Parts kit	Consult
153878	Connector, 4-Position	Consult

## Dual Analog Out



16 bit, voltage output 0-10 VDC, current output 0-20mA, 4-20mA

PART #	WEIGHT	PRICE
164686	1280 option, dual analog out	Consult
162931	Board only	Consult
164693	Parts kit	Consult
153878	Connector, 4-Position	Consult

## Relay Card 4-Dry Contact



Relay 4 channel, dry contact, max current 3A @ 30 VDC, 3A @250VAC

PART #	DESCRIPTION	PRICE
164689	1280 option, relay card	Consult
164974	Board only	Consult
164696	Parts kit	Consult
152381	Connector, 8-Position	Consult

## EtherNet/IP



ODVA compliant, allowing connection between scales and industrial network for data exchange with PLC or DCS systems.

PART #	DESCRIPTION	PRICE
165792	1280 option, EtherNet/IP	Consult
152357	EtherNet/IP Module only	Consult
164756	Host board only	Consult

## DeviceNet



CIP compliant, allowing connection between scales and industrial network for data exchange with PLC or DCS systems with up to 64 node connections.

PART #	DESCRIPTION	PRICE
165793	1280 option, DeviceNet	Consult
152360	DeviceNet module only	Consult
164756	Host board only	Consult

## Profinet



Integrates scales into a network, allowing data exchange with PLC or DCS systems. Fully compliant with internationally accepted Ethernet standards.

PART #	DESCRIPTION	PRICE
165794	1280 option, Profinet	Consult
152355	Profinet module only	Consult
164756	Host board only	Consult

## Modbus TCP



Integrates scales into a network, allowing data exchange with PLC or DCS systems.

PART #	DESCRIPTION	PRICE
165796	1280 option, Modbus TCP	Consult
152359	Modbus TCP module only	Consult
164756	Host board only	Consult

## Profibus DP



Profibus DP compliant, integrates scales into a network for data exchange with PLC or DCS systems with up to 125 node connections.

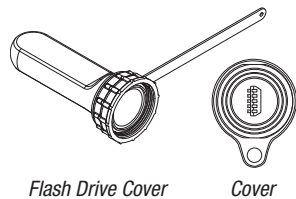
PART #	DESCRIPTION	PRICE
165795	1280 option, Profibus DP	Consult
152358	Profibus module only	Consult
164756	Host board only	Consult

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## Grayhill Relays and Racks

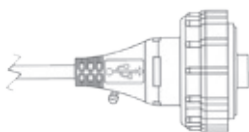
PART #	DESCRIPTION	PRICE
52332	2-channel input relay, 2.5-28 VDC	Consult
52318	2-channel input relay, 120 VAC	Consult
52319	2-channel input relay, 240 VAC	Consult
52331	2-channel input relay, 10-32 VDC	Consult
52316	2-channel output relay, 120-140 VAC at 2 amp	Consult
52317	2-channel output relay, 240-280 VAC at 7 amp	Consult
71376	2-channel output relay, 3-60 VDC at 1 amp	Consult
71377	2-channel output relay, 0-200 VDC/VAC at 1.5A/10W (dry contact)	Consult
84698	2-channel output relay, inductive load, 120-140 VAC at 2A	Consult
84699	2-channel output relay, inductive load, 240-280 VAC at 2A	Consult
52312	8-channel relay rack, panel mount and wall mount, requires 50-Pin flat or round ribbon cable - 4 slots	Consult
52314	16-channel relay rack, panel mount and wall mount, requires 50-Pin flat or round ribbon cable - 8 slots	Consult
52315	24-channel relay rack, panel mount and wall mount, requires 50-Pin flat or round ribbon cable - 12 slots	Consult
170008	Cable, 60-Pin flat ribbon w 50-Pin adapter, 24 in length	Consult
170009	Cable, 60-Pin round w 50-Pin adapter, 60 in length	Consult
170736	Cable, 60-Pin round w/ cord grip and 50-Pin adapter	Consult



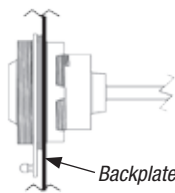
Unsealed Connectors



Sealed Connector



Sealed Receptacle



## Options

PART #	DESCRIPTION	PRICE
<b>Manuals and Software</b>		
77925	Revolution scale software	Consult
166046	Manual, Operation	Consult
167659	Manual, Technical	Consult
167660	CD, 1280 Documents	Consult
164939	8 GB Micro SD card with SD and USB adapter	Consult
173046	USB flash drive, 1 GB	Consult
<b>Primary Component Parts</b>		
163400	500 NIT display	Consult
163399	1000 NIT display	Consult
160757	CPU board assembly	Consult
160758	Back Plane board assembly	Consult
162693	AC power supply board	Consult
162694	DC power supply board	Consult
161731	Overlay, keypad	Consult
161730	Overlay, touchscreen (not recommended field replacement)	Consult

## Options/Accessories

PART #	DESCRIPTION	CONNECTOR TYPE				PRICE
		Sealed		Unsealed		
		A	B	A	B	
<b>USB Cables</b>						
<b>Note:</b> Cables have a plug						
152434	Unsealed connectors USB-A to USB micro A, 2 m cable			X		Consult
79074	Unsealed connectors USB-A to USB-B, 2 m cable			X	X	Consult
124700	Sealed connectors, USB-A to USB-B, 3 m IP68 cable	X	X			Consult
126477	Sealed connector USB-A to unsealed connector USB-A, 3 m IP68 cable	X		X		Consult
124701	Sealed connector USB-A to unsealed connector USB-B, 3 m IP68 cable	X			X	Consult
124702	Sealed connector USB-B to unsealed connector USB-A, 3 m IP68 cable		X	X		Consult
<b>USB Receptacles</b>						
<b>Note:</b> Receptacles have a socket						
176790	Sealed receptacle USB-A for panel mount, 0.75 m cable	X				Consult
126476	Sealed receptacle USB-A for wall mount, 0.5 m cable	X		X		Consult
172735	Sealed receptacle USB-A for universal, 0.25 m cable	X		X		Consult
124694	Cover for sealed receptacles					Consult
124689	Cover for flash driver mounts on sealed receptacle					Consult
<b>Ethernet Cables</b>						
72697	Unsealed Ethernet, RJ45 to RJ45, 2 m cable				X	Consult
124706	Sealed to sealed Ethernet 3 m cable	X				Consult
124707	Sealed to unsealed Ethernet 3 m cable	X		X		Consult
<b>Ethernet Receptacles</b>						
176789	Sealed receptacle Ethernet RJ-45, 0.75 m cable	X				Consult
172734	Sealed receptacle Ethernet RJ-45, 0.5 m cable	X				Consult
126353	Sealed receptacle Ethernet RJ-45, 0.25 m cable	X				Consult