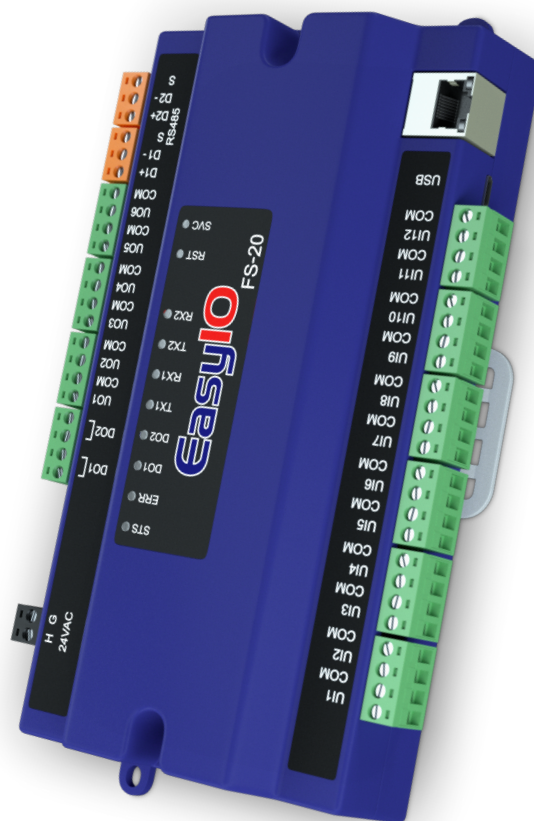# EasyIO FS-20
20-POINT, IP CONTROLLER

The FS-20 is a high-performance network controller with a 1.2 GHz quad core processor, 512 MB RAM, 8GB flash memory, HTML5 graphics, a suite of applications and kits, and multifunctional adapter widgets.

The FS-20 offers incomparable performance and live programming via EasyIO CPT Tools. The FS-20 supports the latest IT network and security standards. The built-in VPN allows for secure remote connectivity, a unique feature in a controller.

Protocols such as BACnet, Modbus, MQTT, Sox, and TCom are supported. The FS series includes SQL database and REST API for additional data integration and multi-system interoperability. Flash RAM enables data collection and storage at the device.

The FS-20 has 12 UI, 6 UO, and 2 DO. Input point capacity can be expanded using the FD20i. Device and engineering licenses and annual maintenance upgrades are included in the one-time cost of the controller.

FEATURE
HIGHLIGHTS

- On board 8GB of EMMC for storage and history

- Supports Enterprise Network Security 802.1x and TLS 1.2, SSL, IPv6 and DHCP Client

- BACnet MSTP Client/Server, BACnet IP Client/Server, Modbus RTU Master/Slave, Modbus TCP Master/ Slave, MQTT, TCOM, SOX

- EasyIO Peer to Peer Protocol, compatible with FS, FG+, FW and FT Series

- Built-in HTML 5 web server and SSL certificate support

- RESTful API and graphics web services

- Built-in VPN Server and Client

- Network Time Protocol (NTP) Client

- SMTP protocol (outgoing email) with SSL authentication

- SQL Lite up to 100,000 records

- Built-in dashboard

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SPECIFICATIONS

Power Supply	**24V AC +/- 5% or 24V DC +20% / - 15%**
Consumption	18VA
Current Rating	500mA at 24VAC/VDC
Storage Temp	-20 to 85 oC (-4 to 185 oF)
Operating Temp	0 to 65 0C (32 to 150 oF)
Operating Humidity	10% to 90% Relative Humidity non-condensing
Dimension	**198 x 104 x 44 (mm), 7.8 x 4.1 x 1.7 (inches)**
Material	UL Approved
Weight	436g / 15.4 oz
Main Processor	**1.2 Ghz Quad Core ARM A7**
Processor	ARM Cortex A0 48 Mhz
Flash Memory	8 GB
RAM	512 MB
SD card Holder	Yes. For Application backup Storage
Ethernet	1 x Ethernet Port 10Mb/100Mb 10Base-T/ 100Base-T interface, half or full duplex
RS 485 Ports	2 x RS485
Real Time Clock (RTC)	Real Time Clock with min 5 days backup by superCAP
Power Failure Protection	SuperCap Apps Safety Backup
Network Security Standard	IPv6, DHCP Client, SSL, TLS 1.2, 802.1x VPN Client and Server
Database and API	MQTT, SQL database and REST API
Protocols Supported	**BACnet MSTP Client/Server, BACnet IP Client/Server, Modbus RTU Master/Slave, Modbus TCP Master/Slave, TCOM, web services, HTML5, SOX**
Email Service	SMTP protocol (outgoing email) with SSL authentication
Time Sync Protocol	Network Time Sync Protocol
Modbus Baud Rate	Speed : (9.6K, 19.2k, 38.4K, 57.6K) , Data Bits : 8 , Parity : Odd, Even, None
BACnet Baud Rate	Speed : 9.6K, 19.2k, 38.4K, 76.8K
Universal Inputs	**12 x UI , 12-bit ADC with PGA** **Resistance Mode : 500 - 500K Ohms (+/- 10 Ohms)** **Voltage Mode : 0-10V (+/- 0.05V)** **Current mode: 0-20mA DC (+/- 0.01 mA)** **Impedance <25 Ohms** **Pulse count mode (max): 20 Pulse per sec at 50% duty cycle (20Hz)** **Digital mode : Voltage Free Contact**
Digital Output	2 x DO (with LED Indicator)
	Type: Relay Contacts, SPST NO, 48VA/2A at 24V
Universal Output	6 x UO, 12-bit DAC Voltage mode: output range 0-10V DC, Min Load Impedance 2,000 Ohm. Maximum 5ma current draw Current mode: 0-20mA, Max Load Impedance 800 Ohm. Digital mode: maximum sinking current 200mA (for Switching Relays)
SKU	**EasyIO-FS-20** **EasyIO-FS-20M (US only)**
Warranty	18 months
Certifications	CE, BTL, UL, FCC, RoHS
Engineer Tool	CPT
Product and Engineering License	Included
Annual Maintenance	Included
Contact	**www.easyio.com**

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