



PG-139-100-AB Fike Cheetah to Modbus RTU Protocol Converter

PG-139-100-AB is highly powerful, superior, completely configurable and productive Building & Industrial Automation gateway for integrators to effortlessly interface devices to networks in commercial buildings and industrial plants.

PG-139-100-AB Gateway model supports Fike Cheetah and Modbus RTU protocols. It is a Bi-directional Converter that can be configured as a Client on Fike Cheetah side and a Server/Client on Modbus RTU protocol interface.

When configured as a Fike Cheetah client, the PG-139-100-AB can read data from your Fike Cheetah fire panel and publish it as Modbus RTU data. Also, it can write commands sent from the Modbus RTU side to the Fike Cheetah fire panel.

When configured as a Modbus RTU client, the PG-139-100-AB can read data from your Modbus RTU devices and publish it as Fike Cheetah type data. Also, it can write commands sent from the Fike Cheetah side to the Modbus RTU devices.

The PG-139-100-AB can be configured to behave as a server on Modbus RTU interfaces. This mode is useful when data exchange is required between a Fike Cheetah client (for eg. SCADA) and a Modbus RTU client (for eg. a Building Management System).

The PG-139-100-AB can be configured to behave as a client on both Fike Cheetah and Modbus RTU interfaces.

PG-139-100-AB gateways have benefitted system integrators worldwide with its powerful line of gateways. Additionally, PG-139-100-AB gateway runs the same protocol conversion software on a productive and cost efficient platform backed by the experience, engineering expertise and technically proven support that integrators have come to expect from PG-139-100-AB.

Features

- Ability to interface upto 1000 points
- DIN rail mount optional
- DIP switches to select baud rate or node ID on the fly
- Multi-configuration capability
- BACnet COV support for fast data communication while reducing the traffic over a BACnet network



Specifications

Environment	Operating Temperature: -40 to 75 °C (-40 to 167 °F)	
	Relative Humidity:5-90% RH non-condensing	
Power Requirements	9-30 VDC or 12-24 VAC	
	Current Draw @ 12V about 250Ma	
Physical Dimensions(HxWxD)	4.5x2.9x1.6 in. (11.5x7.4x4.1 cm)	
	0.4 lbs (0.2 Kg)	
Other	Configuration/Diagnostic utilities	
	Capacity: 1000 points	
	Table,Wall or DIN rail mount	
Communication Interfaces	RS-485	1
	RS-485 or RS-232	1
	Ethernet 10Base-T, 100BASE-T ²	1
	Mbus	-
	KNX	-
	LonWorks	-
Approvals	TUV Approved to UL 916 and CSA C22.2 standards	
	BTL and LonMark certified	
	LonMark Certified	
	RoHS Compliant	
	GOST-R Certified	
	CE and FCC	



Fike Cheetah Protocol Driver Description

Connection Facts		
Mode	Nodes	Comments
Client	1	Only one node per port
Formal Driver Type	Passive Client	
Connection Information		
Connection Type:	RS-232 or RS-485 (Two Wire, Half-Duplex)	
Baud Rates:	9600 (Vendor Limitation)	
Data Bits:	8 (Vendor Limitation)	
Stop Bits:	1 (Vendor Limitation)	
Parity:	None	
Multidrop Capability:	No	
Devices Tested		
Device	Tested	
Cybercat Panel	Factory	
Cheetah Panels	Site	
Fike Multi-Interface Module	Site	
Fike Cheetah Xi	Site	
CyberCat	Site	
Data Types Supported		
The driver does not transfer typed data.		
Passive Client Operations Supported		
As a Passive Client		



Graphics command (also known as command 6.0)
Command #1.0: send panel status - cheetah /evax
Command #1.2: send panel status - cyber-cat
Networked panel events (MIM): System & Device Troubles Device Alarms Vesda Events Device General, Supervisory Classic Cheetah Events from Gateway
Write Operations Supported
As a Passive Client
Acknowledgements are supported in a limited way.



Unsupported Functions and Data Types

Function	Reason
Command #2.1: send history event - cyber cat Command #3.1: panel switch command - reset Command #3.2: panel switch command - acknowledge Command #3.3: panel switch command - silence Command #3.4: panel switch command - walktest Command #3.5: panel switch command - drill Command #3.16: panel switch command - process state de-activated in zone <d0> Command #3.17: panel switch command - process state activated in zone <d0> Command #3.33: panel switch command - turn off peripheral transmissions Command #3.34: panel switch command - restart peripheral transmissions Command #3.60: panel switch command - enable/disable ir communications Command #3.61: panel switch command - fan restart Command #7.4: panel requests status update from peripheral device Command #7.5: peripheral device response to to command #7.4	It is a data transfer device, and as such, programming messages are not required

Functions Described

All three supported commands report zone and device states for multiple loops. Some panel status information is provided in the message and stored by the driver. Details are available in the manual.



Firmware Limitations & Capabilities

Fike Cheetah Panel

The following limitations to older firmware have been identified. It is unable to correlate this change with a particular Fike firmware version number at the current time.

Messages 1.1 and 6.0 (graphics update msg) are sent by older panels. Only message 6.0 contains information that can be used by the driver to reflect zone and device states. The 6.0 message is sent infrequently (typically 1 in 60 messages) and this results in a zone/device state update every few minutes.

Message 6.0 Limitations

- Can only report data for 127 zones. Data is limited to Alarm, Trouble, Pre-Discharge and Released states
- Can only report data for 127 devices on loops 1-4. Data is limited to Alarm, Trouble states.
- Message 1.1 - Older firmware
- No useful information about zones or devices.

Message 1.1 – Newer Firmware

- Supports zones 1-240. For zones the following states are reported: Abort, Trouble, Supervisory, Disabled, Pre-alarm, Alarm, Pre-Discharge, Released, Processed.
- Supports devices 1-127 on loops 1-4. For devices the following states are reported: Alarm, Pre-Alarm and Trouble

Fike XI Panel

The XI panels send messages which contain zone and device data. The message is known by Fike as a '1.2' message.

The message reports if a device is normal, alarm, trouble or in a pre-discharge state. 256 Devices on loops 1-4 are reported. 255 Zones report Process, Trouble, Supervisory, Disable, Pre-Alarm, Alarm states.



ModBus RTU Protocol Description

PG-139-100-AB Mode	Comments
Client	Nodes:1 Only 1 client node allowed on Multidrop systems
Server	Nodes:255 Actual electrical loading may reduce number of usable server nodes
Formal Driver Type	Serial
	Client or Server
Connection Information	Connection Type: RS-232 or RS-485(Two wire, half-duplex)
	Baud Rate: 110-115200, standard baud rates only
	Data Bits: 7,8
	Parity: Even, odd, None
	Multidrop Compatibility: Yes
Function Code Supported	
Function Codes	Description
01	Read Discrete Output Status (0xxxx)
02	Read Discrete Input Status (1xxxx)
03	Read Output Registers (4xxxx)
04	Read Input Registers (3xxxx)
05	Force Single Coil (0xxxx)
06	Preset Single Register (4xxxx)
15	Force Multiple Coils (0xxxx)
16	Preset Multiple Registers (4xxxx)

Dimensions:

