

FieldServer Driver - Serial FS-8700-78 Data Aire DART

Device	Tested
DART III R4.8	Factory/Customer

Interface: EIA232
Baud Rates: 2400
Data Bits: 8
Stop Bits: 1
Parity: None
Handshaking: None

The DART Driver is capable of direct connection to a Data Aire DART III (or earlier).

The FieldServer is connected to the RS232 serial port of the Dart. The Fieldserver can read and write but active polling must be minimized as in reduces the amount of time that the DART spends controlling the networked devices. The driver operates primarily as a passive client listening to echoes of the data being polled by the DART. The DART must be set to 'Echo' mode on the front panel of the Dart for the driver to operate correctly. There is no alternative to this essential but manual setup-step.

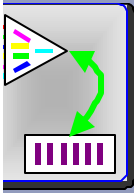
The driver is not suitable for direct connection to a network of Data Aire DAP or Chiller devices. A different driver (DAP driver) is provided for this type of connection.

The driver may be configured very simply, storing all the data obtained from each field device in a large array. A simple one line configuration tells the driver to store 'everything'. The driver manual identifies the location in the array of each data field. Advanced configuration are also possible.

The driver can write set points and other data to the DAP devices connected to the network. It does this by communicating with the DART which passes the messages onto the DAP devices. A consequence of this, is that for a period of time the DART suspends its control and management of the DAP devices. Another consequence of this is that the performance of the driver is very slow.

The driver is capable of storing all data available from the following devices if they are connected to the DART.

Device	Driver Capability	Description
"1"	None	044 data logger



Protocol Driver



A Sierra Monitor Company

"2"	Yes	046 expanded DAP
"3"	Yes	046 2 mod chiller
"4"	Yes	046 3 mod chiller
"5"	Yes	048 DAP, 80-character display
"6"	Yes	049 DAP, 16-character display
"7"	Yes	080 DAP II, no relay expansion
"8"	Yes	080 Chiller II
"9"	Yes	080 DAP II, with relay expansion
"10"		Not Defined
"11"		Not Defined
"12"		Not Defined
"13"		Not Defined
"E"	Yes	080 DAP II, with analog module
"F"	Yes	080 DAP II, with relay and analog

Driver is capable of storing DART status/config data but in its current version cannot extract specific data fields. DART II, III

Performance Issues

Several factors outside FieldServer's control make for slow communications with Data Aire devices. The Data Aire communications is based on a very low baud rate. In addition inter-message timing constraints and overhead requirements for active messages in a Dart configuration add significant time to each transaction.

When a used with a DART device, writing to a set point (or other variable) may take up to 8 seconds to complete the transaction. The results of the write will not be seen until the DART has timed-out back into control mode and echoes the new data to the Fieldserver. This could take several minutes if there are many devices on the loop and will take at least 30 seconds.

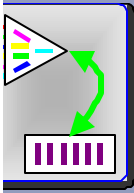
When writing continuously, with DART configurations, the minimum time interval between successive writes is 2 minutes.

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Revision History

Date	Driver Version	Document Revision	Resp	Comment
6/17/02	1.00a	0	GFM	Releasing