# **GE Vernova Grid Solutions**

# **D20E Ethernet IO Modules**

#### Release Notes

MIS-0112

Version 6.3.1 Revision 1





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# **Table of Contents**

Abou	About this Document5		
Prod	uct Support6		
1.	Version 6.2.0-4 (2017-Oct-12)		
1.1	Key Features7		
1.2	Minimum Software Versions7		
1.3	Upgrade Procedure7		
2.	Version 6.2.7-2 (2019-Feb-28)		
2.1	Key Features8		
2.2	Minimum Software Versions8		
2.3	Upgrade Procedure8		
3.	Version 6.2.13-1 (2019-May-31)9		
3.1	Key Features9		
3.2	·		
3.3			
3.4	10		
4.	Version 6.2.16-1 (2020-Jan-30)10		
	K 5 .		
4.1	Key Features		
4.2			
4.3	Upgrade Procedure		
5.	Version 6.2.20-1 (2021-May-21)11		
5.1	Key Features11		
5.2	Minimum Software Versions11		
5.3	Upgrade Procedure11		
6.	Version 6.3.0-2 (2023-July-27)12		
6.1	Features Added and Issues Resolved12		
6.2	Installation File Information		
6.3			
6.4			
7.	Version 6.3.1-2 (2025-May-02)14		
7.1	Features Added and Issues Resolved14		
7.2			

7.3	Minimum Software Versions	.14
	Upgrade Procedure	
Modificat	ion Record	16

#### **About this Document**

#### **Purpose**

The purpose of this document is to outline key updates for a D20E I/O Module firmware and associated configuration software release.

#### **Intended Audience**

This document is an external document intended for both GE Vernova Staff and Customers.

#### **Additional Documentation**

For further information about the D20E Substation I/O Module, refer to the following documents:

- 994-0145 D20E Ethernet IO Module Instruction Manual
- DAPserver Studio User Manual

For the most current version of the above documentation, please download a copy from:

https://www.gevernova.com/grid-solutions/resources?prod=d20e&type=3

or the Substation Automation Technical Support Library at:

http://sc.ge.com/\*SASTechSupport

# **Product Support**

For questions or further product support, please contact the GE Vernova support team using:

Region	E-mail	Telephone
Global Contact Centre	GA.support@GEVernova.com	+44 1785 250070
Central, East Asia, Pacific	GA.supportCEAP@GEVernova.com	+65 6749 0777
India	GA.supportIND@GEVernova.com	No Phone Line
Middle East, North Africa, Turkey	GA.supportMENAT@GEVernova.com	+971 4 375 6950
Europe, Russia, CIS,	ERCIS:	+34 94 4858854
Sub-Saharan Africa	GA.supportERCIS@GEVernova.com	
	France: SAM_Aftersales@gevernova.com	
	Poland: <a href="mailto:support.PLS@gevernova.com">support.PLS@gevernova.com</a>	
	UK: support.AGS@gevernova.com	
North America	GA.supportNAM@GEVernova.com	+1-877-605-6777 (Global toll- free) +1-800-547-8629 (NAM toll-free) +1-678-844-6777 (Direct)
Latin America	GA.supportLAM@GEVernova.com	+55 48 2108 0300

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# 1. Version 6.2.0-4 (2017-Oct-12)

#### 1.1 Key Features

With the D20E v6.2.0-4 firmware, the following key features have been added or improved:

- 1 ms time stamp accuracy
- Simplified design for improved reliability, single module simplified design
- Similar form factor and terminal block alignment (pin to pin) with Multilin D20 IO Module
- Protection grade onboard relay 8A (300VDC / 4A continuous)
- No need for interposing relay
- Open Protocols for the Server/Publisher:
  - o DNP3/IEEE1815 or
  - o IEC 61850

#### 1.2 Minimum Software Versions

The D20E firmware is distributed with DAPserver Studio. When a new release of DAPserver Studio is installed on the Windows PC, the matching version of firmware is available to be downloaded to the D20E module.

**NOTE:** When connecting to a D20E module, the DAPserver Studio version should match the firmware on the D20E module. If the D20E is running a firmware version that is older than the DAPserver Studio software version, DAPserver Studio may not connect (communicate) with the older D20E firmware device. However, most older firmware versions on the D20E will connect to the latest DAPserver Studio.

The following defines the minimum software versions required for interaction with the D20E.

Package	Minimum Version
DAPserver Studio	6.2.0-4

#### 1.3 Upgrade Procedure

# 2. Version 6.2.7-2 (2019-Feb-28)

#### 2.1 Key Features

With the D20E v6.2.7-2 firmware, the following key features have been added or improved:

- Resolved an issue where all admin level actions were blocked on the D20E for new users in the admin user group. This resulted in the device always being offline when exploring, the Project Sync operation not restarting the D20E, and real time settings not being applied.
- Performed cybersecurity improvements.
- Resolved issue with the IEC 61850 Publisher where the OSI-TSEL and OSI-PSEL values swap when using a custom SCL creator.

#### 2.2 Minimum Software Versions

The D20E firmware is distributed with DAPserver Studio. When a new release of DAPserver Studio is installed on the Windows PC, the matching version of firmware is available to be downloaded to the D20E module.

<u>NOTE:</u> When connecting to a D20E module, the DAPserver Studio version should match the firmware on the D20E module. If the D20E is running a firmware version that is older than the DAPserver Studio software version, DAPserver Studio may not connect (communicate) with the older D20E firmware device. However, most older firmware versions on the D20E will connect to the latest DAPserver Studio.

The following defines the minimum software versions required for interaction with the D20E.

Package	Minimum Version
DAPserver Studio	6.2.7-2

#### 2.3 Upgrade Procedure

## 3. Version 6.2.13-1 (2019-May-31)

#### 3.1 Key Features

With the D20E v6.2.13-1 firmware, the following key features have been added or improved:

- Resolved an issue where D20E Counters in the IEC 61850 publisher were using the INT128 datatype (128-bit integers) to send the data. In Clients where the INT128 datatype were not supported, counter values were always offline.
- To resolve this issue, a new "64 Bit-Counters" option under Publisher > View > Protocol was added for forcing INT64 counters.

#### 3.2 Minimum Software Versions

The D20E firmware is distributed with DAPserver Studio. When a new release of DAPserver Studio is installed on the Windows PC, the matching version of firmware is available to be downloaded to the D20E module.

<u>NOTE:</u> When connecting to a D20E module, the DAPserver Studio version should match the firmware on the D20E module. If the D20E is running a firmware version that is older than the DAPserver Studio software version, DAPserver Studio may not connect (communicate) with the older D20E firmware device. However, most older firmware versions on the D20E will connect to the latest DAPserver Studio.

The following defines the minimum software versions required for interaction with the D20E.

Package	Minimum Version
DAPserver Studio	6.2.13-1

#### 3.3 Upgrade Procedure

Please refer to "Chapter 10: Maintaining a D20E Module Firmware" in the 994-0145 D20E Ethernet IO Module Instruction manual for detailed steps on how to upgrade any version of the D20E to the firmware version corresponding to the DAPserver Studio version that is being used.

#### 3.4 Known Issue

When installing DAPserver Studio 6.2.13.1 on a Windows 7 or Windows 10 computer for the first time, a "Warning 4154. Gtk# for .Net 2.12.25 prerequisite was not correctly installed" message may appear.

To resolve this issue, first install Gtk# for .Net 2.12.25 separately and then install DAPserver Studio. Gtk# for .Net 2.12.25 can be downloaded from the D20E folder on the Substation Automation Technical Support Library or directly from <a href="http://download.xamarin.com/GTKforWindows/Windows/gtk-sharp-2.12.25.ms">http://download.xamarin.com/GTKforWindows/Windows/gtk-sharp-2.12.25.ms</a>i

# 4. Version 6.2.16-1 (2020-Jan-30)

#### 4.1 Key Features

With the D20E v6.2.16-1 firmware, the following key features have been added or improved:

• Resolved an issue where D20E Subnet Mask for USB port is 255.0.0.0. Modified to 255.255.255.0 to allow routing for a 10.x.x.x IP on Ethernet ports.

#### 4.2 Minimum Software Versions

The D20E firmware is distributed with DAPserver Studio. When a new release of DAPserver Studio is installed on the Windows PC, the matching version of firmware is available to be downloaded to the D20E module.

<u>NOTE:</u> When connecting to a D20E module, the DAPserver Studio version should match the firmware on the D20E module. If the D20E is running a firmware version that is older than the DAPserver Studio software version, DAPserver Studio may not connect (communicate) with the older D20E firmware device. However, most older firmware versions on the D20E will connect to the latest DAPserver Studio.

The following defines the minimum software versions required for interaction with the D20E.

Package	Minimum Version
DAPserver Studio	6.2.16-1

#### 4.3 Upgrade Procedure

# 5. Version 6.2.20-1 (2021-May-21)

#### 5.1 Key Features

With the D20E V6.2.20-1 firmware, the following key features have been added or improved:

 DAP Server Studio auto exits when changing digital input "initial value" or "class", in Windows 10 Enterprise with only Dot Net Framework 4.8

#### 5.2 Minimum Software Versions

The D20E firmware is distributed with DAPserver Studio. When a new release of DAPserver Studio is installed on the Windows PC, the matching version of firmware is available to be downloaded to the D20E module.

<u>NOTE:</u> When connecting to a D20E module, the DAPserver Studio version should match the firmware on the D20E module. If the D20E is running a firmware version that is older than the DAPserver Studio software version, DAPserver Studio may not connect (communicate) with the older D20E firmware device. However, most older firmware versions on the D20E will connect to the latest DAPserver Studio.

The following defines the minimum software versions required for interaction with the D20E.

Package	Minimum Version
DAPserver Studio	6.2.20-1

**Note 1**: The gtk-sharp-2.12.25.msi has to be installed before installing the DAPServerStudio. It is available along with the binary.

**Note 2**: DAPserver View does not work in Windows 7. Please use 6.2.19-1 or consider migrating to Windows 10 if this feature is critical for your installation.

#### 5.3 Upgrade Procedure

# 6. Version 6.3.0-2 (2023-July-27)

#### 6.1 Features Added and Issues Resolved

With the D20E V6.3.0-2 firmware, the following features have been added or improved and issues have been resolved:

GE Vernova Internal Reference #	Description
DCSSUP-21320	D20E Firmware and Configuration are now stored on flash chip instead of SD Card.
DCSSUP-21153	Resolved: DAPServer Studio drop down menu not working for non-GE laptops.
DCSSUP-21320	Resolved: Slow D20E Memory leak that could cause a soft reboot after ~4 years.
DAP-781	Resolved: Warning 4154 during fresh install of DAP Server Studio. Integrated gtk-sharp-2.12.25 pre-requisite into installer so it does not need to be manually pre-installed.
DCSSUP-23416	Resolved: D20E always asserts T- quality flag for AI and DI over IEC 61850 MMS protocol.
DCSSUP-23013	Implemented IEC 61850 MMS Status object
DCSSUP-21320	Disable DNP3 Time Sync by default. NTP time sync is recommended.
DCSSUP-21320	Default DNP3 AI deadbands to 0.2% of full scale (32 counts).

#### 6.2 Installation File Information

Installer Name	DAPserverStudioSetup-6.3.0-2.exe
SHA256	4502b5205b726e8dc33715998ff988d78ab18f6c80e1793e84c83fb69723fc10
MD5SUM	6c1214c748eb5a71c2ccc097b1c0f62a

#### 6.3 Minimum Software Versions

The D20E firmware is distributed with DAPserver Studio. When a new release of DAPserver Studio is installed on the Windows PC, the matching version of firmware is available to be downloaded to the D20E module.

**NOTE:** When connecting to a D20E module, the DAPserver Studio version should match the firmware on the D20E module. If the D20E is running a firmware version that is older than the DAPserver Studio software version, DAPserver Studio may not connect (communicate) with the older D20E firmware device. However, most older firmware versions on the D20E will connect to the latest DAPserver Studio.

The following defines the minimum software versions required for interaction with the D20E.

Package	Minimum Version
DAPserver Studio	6.3.0-2

**Note**: DAPserver View does not work in Windows 7. Please use 6.2.19-1 or consider migrating to Windows 10 if this feature is critical for your installation.

#### 6.4 Upgrade Procedure

## 7. Version 6.3.1-2 (2025-May-02)

#### 7.1 Features Added and Issues Resolved

With the D20E V6.3.1-2 firmware, the following features have been added or improved and issues have been resolved:

GE Vernova Internal Reference #	Description
D-15329	D20E NTP client not working
D-15510	D20E does not correctly apply configuration using Admin user with 6.3.0-2 firmware
D-15330	D20E inconsistent firmware version display
D-15509	D20E IO v6.3.0-2: Setting IP address in 61850 Publisher does not update on screen right away

#### 7.2 Installation File Information

Installer Name	DAPserverStudioSetup-6.3.1-2.3819.exe
SHA256	27cfff1a898ac2caa68939987fc2494d8a5cb2f56ea6d2960594008892118c3f
MD5SUM	92a9079843f60e273fc6642279557dd7

#### 7.3 Minimum Software Versions

The D20E firmware is distributed with DAPserver Studio. When a new release of DAPserver Studio is installed on the Windows PC, the matching version of firmware is available to be downloaded to the D20E module.

<u>NOTE:</u> When connecting to a D20E module, the DAPserver Studio version should match the firmware on the D20E module. If the D20E is running a firmware version that is older than the DAPserver Studio software version, DAPserver Studio may not connect (communicate) with the older D20E firmware device. However, most older firmware versions on the D20E will connect to the latest DAPserver Studio.

The following defines the minimum software versions required for interaction with the D20E.

Package	Minimum Version
DAPserver Studio	6.3.1-2

**Note**: DAPserver View does not work in Windows 7. Please use 6.2.19-1 or consider migrating to Windows 10 if this feature is critical for your installation.

#### 7.4 Upgrade Procedure

# **Modification Record**

Version	Revision	Date	Author	Change Description
6.2.13	0	5 <sup>th</sup> June, 2019	D. Morris	Created for version 6.2.13-1
6.2.16	1	4 <sup>th</sup> Feb, 2020	E. Chamas	Added version 6.2.16-1
6.2.20	0	22 Oct 2021	D. Morris	Added version 6.2.20-1
6.3.0	0	15 Aug 2023	D. Morris	Added version 6.3.0-2
6.3.0	1	29 Aug 2023	D. Morris	Changed font
6.3.1	0	05 May 2025	D. Morris	Added version 6.3.1-2
6.3.1	1	07 May 2025	D. Morris	Corrected date of 6.3.1-2 release