E5515C-14B

S E R V I C E N O T E

Supersedes:
E5515C-14A

E5515C Wireless Communications Test Set (8960 Series)

Serial Numbers: ALL (see additional information for details)

New design DSP board to replace failures on 8960 instruments upgraded to 5.8.

Parts Required:

P/N	Description	Qty.
E5515-61885	DSP ASSEMBLY 5.8 KIT	1

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:

MODIFICATION RECOMMENDED

ACTION CATEGORY:	[X] ON SPECIFIED FAILURE [[]] AGREEABLE TIME	STANDARDS LABOR: 1.0 Hours	
LOCATION CATEGORY:	[X] CUSTOMER INSTALLABLE [X] ON-SITE [X] SERVICE CENTER [X] CHANNEL PARTNER	SERVICE INVENTORY: [X] RETURN [[]] SCRAP [[]] SEE TEXT	USED PARTS: [X] RETURN [[]] SCRAP [[]] SEE TEXT
AVAILABILITY: Product Support Life		NO CHARGE AVAILABLE UNTIL: 1st Aug 2012	
AUTHOR: PR		PRODUCT LINE: PL13	
ADDITIONAL INFORMATION: This service note applies to all instruments with the 5.8 DSP introduced at MY4836xxxx and all units upgraded with the E5515CU-58C upgrade kit. Replace all 5.8 DSPs on failure.			

July 25, 2011

Agilent Technologies

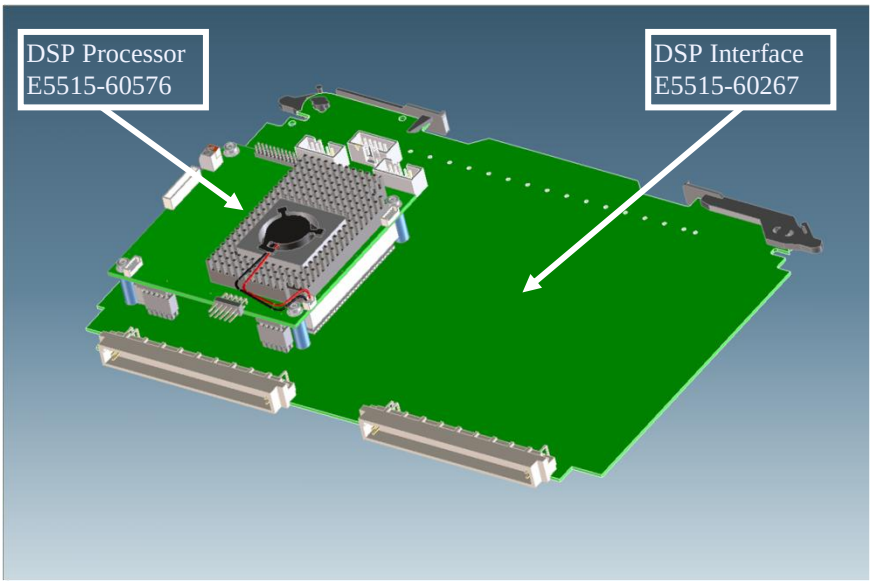
Situation:

There has been an increase in failures on the E5515C due to the 5.8 version of DSP, assembly part number E5515-61301.

The DSP failure is due to a weak thermal design that, in some situations, can lead to a thermal stress failure most notably in year 2 and year 3 of life in high ambient temperature environments ie within test racks with little or no air conditioning.

The DSP Assembly covered by this Service Note consists of two boards; the DSP Interface Board (the full-size board, part number E5515-60267, that is installed into the Digital Motherboard) and the DSP Processor Board (the smaller board, part number E5515-60576, that is mounted onto the DSP Interface Board).

E5515-61301 – Existing 5.8 DSP Assembly with potential fault (note the integrated fan)



At the time of failure, the whole DSP assembly should be swapped with a new DSP which has been designed for improved reliability.

At the same time, an additional fan should be added to the Power Supply to enhance the airflow across the DSP and further reduce the thermal stress.

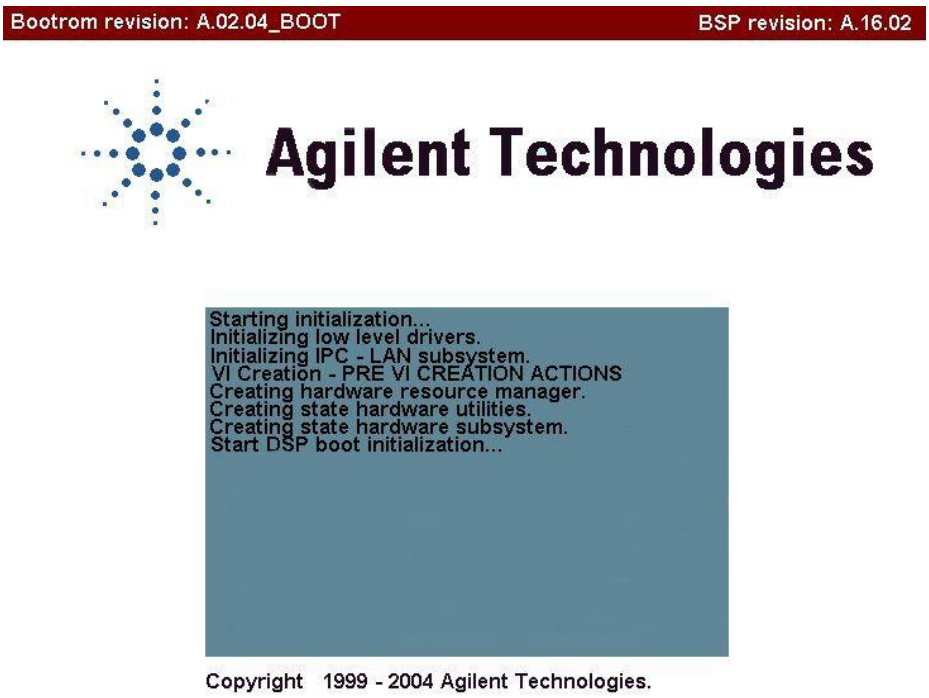
In determining whether to replace the DSP or not under this service note please see the next section for the two most common DSP failures symptoms.

Common Failure Symptoms:

The most common DSP failures during operation are "boot up failures" and intermittent "non-recoverable DSP asserts".

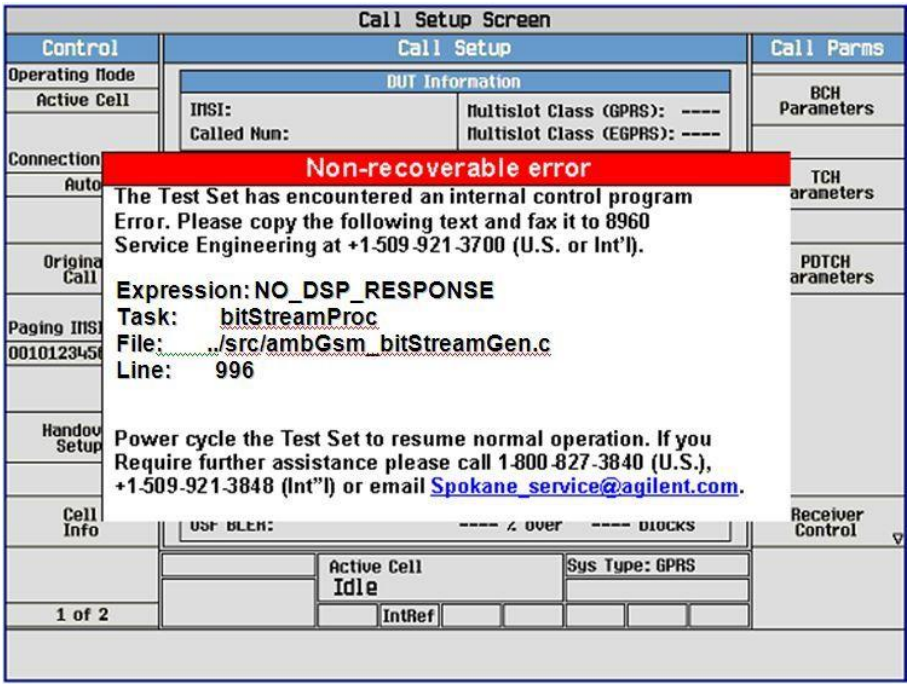
1. DSP Boot Failures:

A typical DSP boot failure is shown below. The 8960 will start booting as normal but will then stall at "Start DSP boot initialization". The instrument would then attempt to reboot and continuously reboot stopping at the "Start DSP boot initialization…." stage.



2. DSP Non Recoverable Error

A typical DSP Non Recoverable Error is shown below. Note the key term **NO_DSP_RESPONSE.**



Follow the below steps to inspect and if necessary replace the DSP assembly

1. Check the E5515C for the 5.8 Hardware:
Connect a PC and the E5515C via LAN using either the front panel **DATA** port (make sure you have the LAN jumper cable installed on rear panel: **LAN 1 PORT** jumper cable to **ETHERNET TO FRONT PANEL**) or connect direct to the **LAN 1 PORT** on the rear panel.

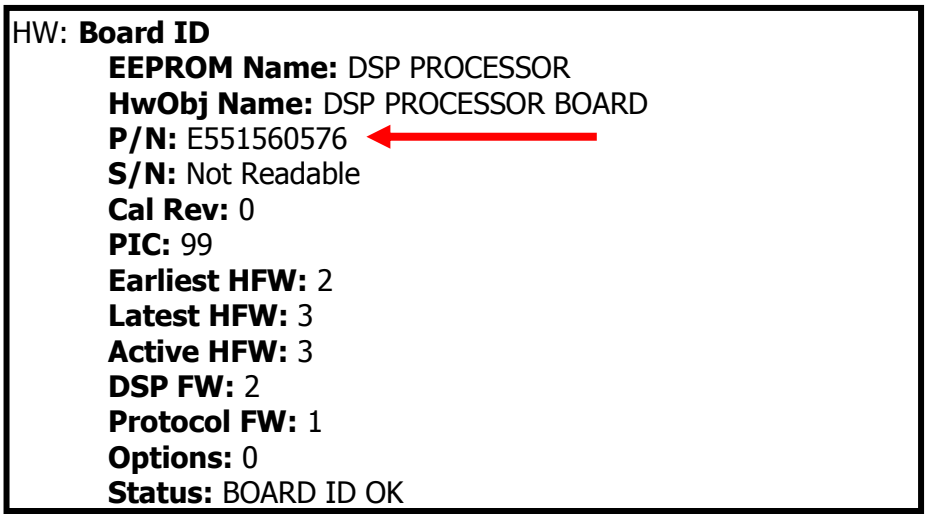
Set the IP Address on the PC and E5515C that will allow communication between the two. The E5515C does not use DHCP so will need a static IP address. To set the IP address on the E5515C first press **SYSTEM CONFIG** then **INSTRUMENT SETUP (F1)**.

Once LAN connection has been established, in a web browser type in the following address:
http://<IP_Address_of_E5515C>/iconfig

This will list the instrument hardware installed.

Search for the DSP Processor Board, near the bottom of the page, and verify the part number is **E5515-60576**.

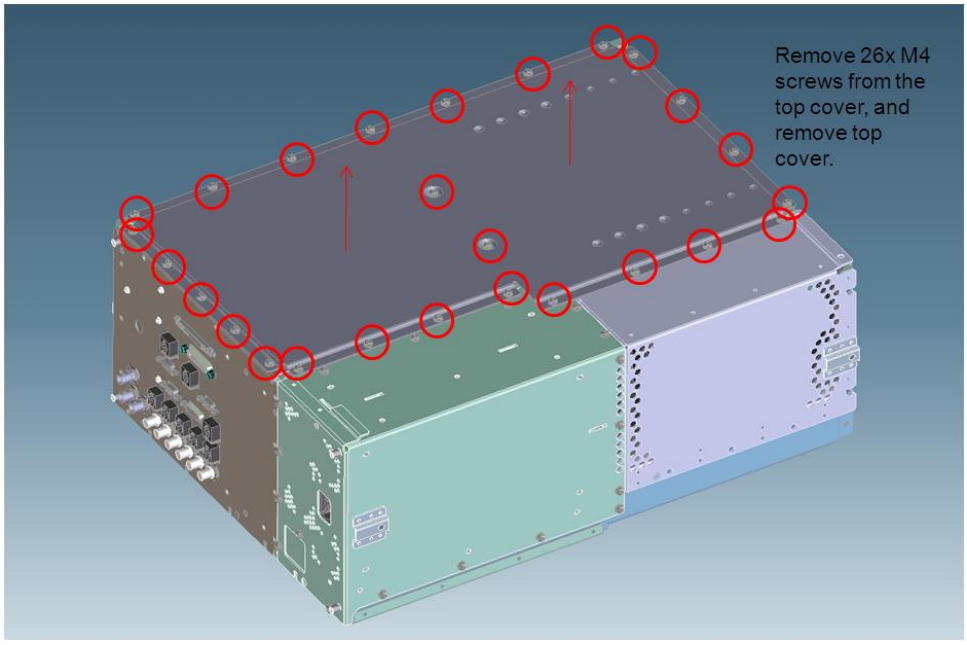
EXAMPLE:



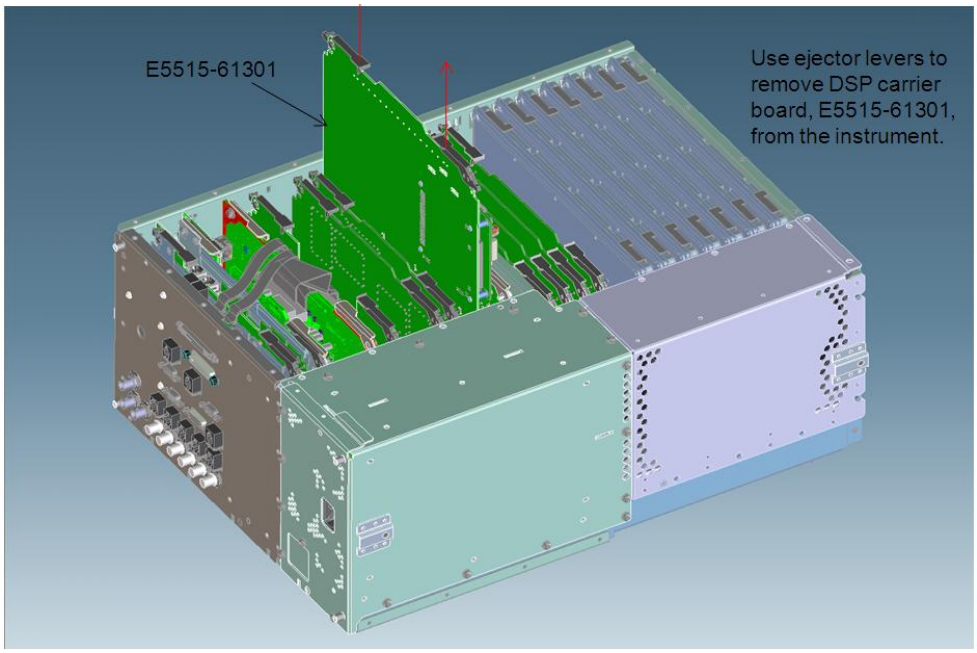
Solution/Action:
If the 5.8 DSP is installed then replace with part number E5515-61885.

Installation Instructions:

1. Remove the outer covers and internal top cover.

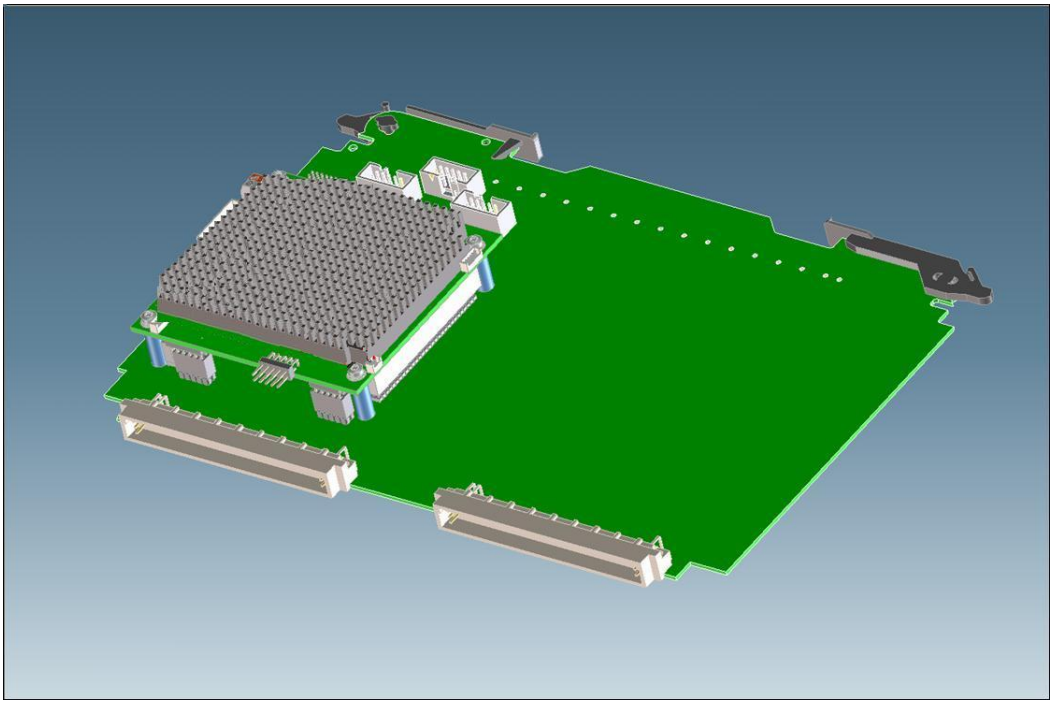


2. Remove the existing 5.8 DSP Assembly

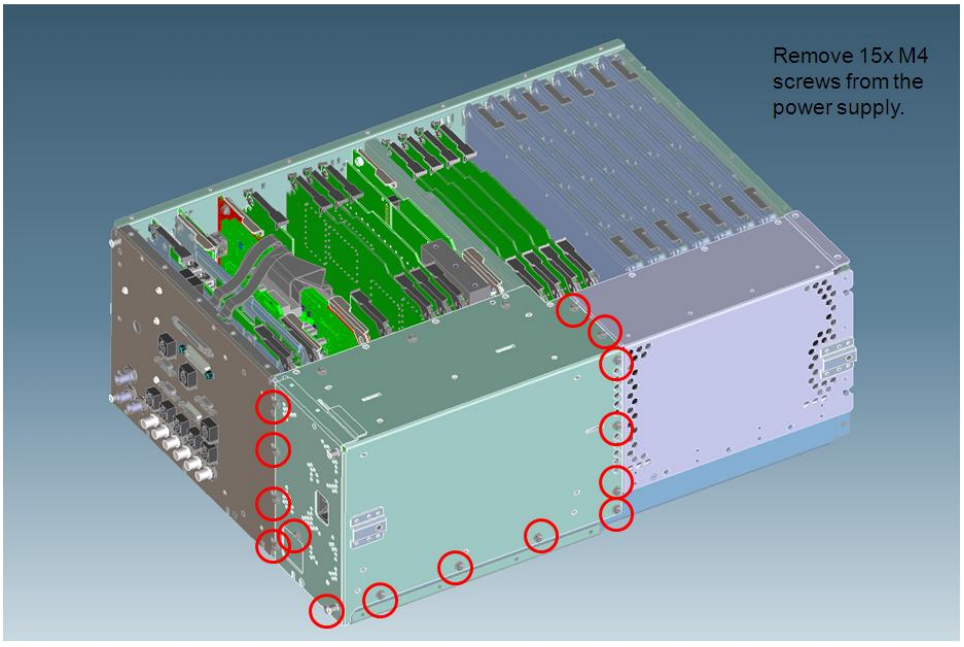


3. Use the repair kit E5515-61885 to replace the DSP

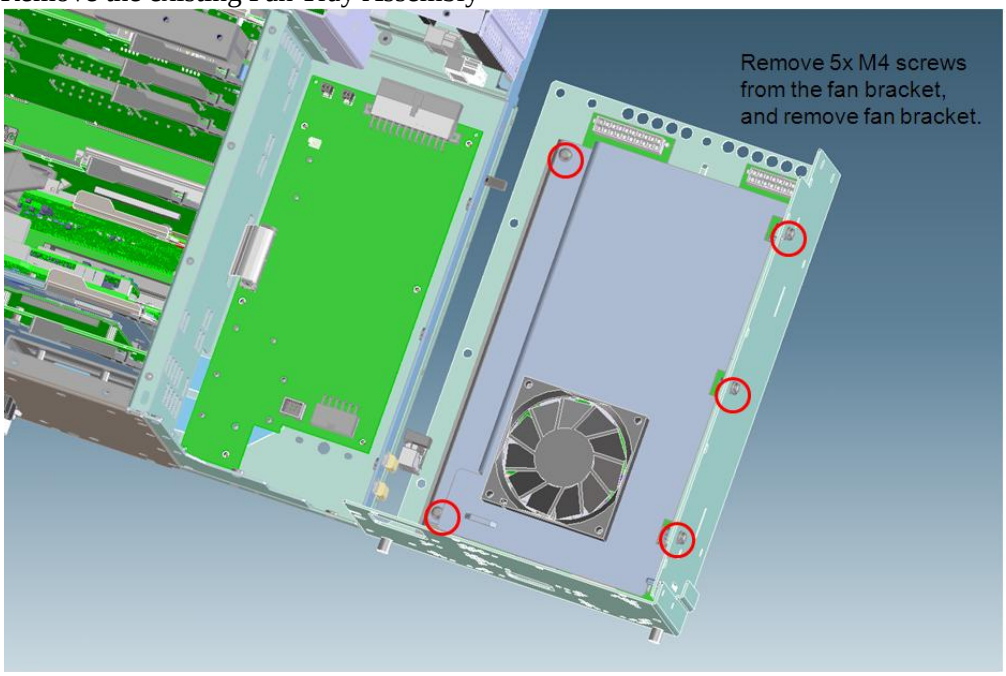
New DSP Assembly (note the larger heatsink ***without*** the integrated fan)



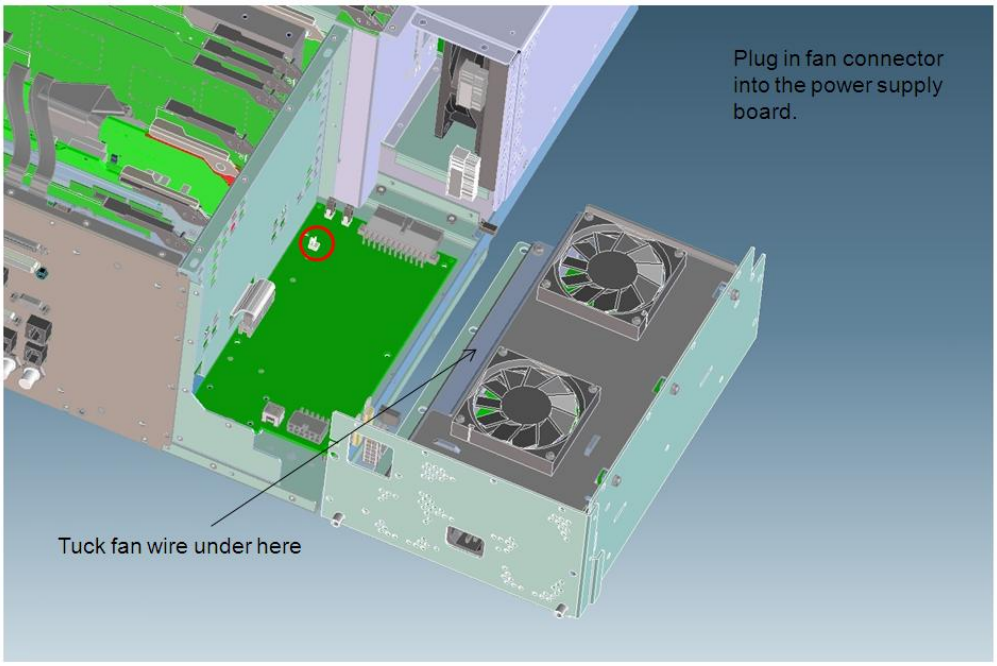
4. Remove the Power supply assembly



5. Remove the existing Fan Tray Assembly



6. Install the new Fan Tray Assembly (note the extra fan)



After installation of the DSP assembly and Power Supply fans is complete, re-install the power supply assembly, and internal cover in reverse order to above using the screws previously removed.

Before installing the external cover, handle straps, and rear bumpers, verify that the test set boots up and operates normally.

Re-calibration is not required.

Return Parts:

Return all parts to the AMC Manufacturing Centre via the PRP process

Agilent Technologies
Attention: Lim, Choon-Siang, PL13 Field Returns
Bayan Lepas Free Industrial Zone
Penang, PG 11900
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